THE BUILDER

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THE LIBRARY OF THE 1944

DIMENSIONAL CO-ORDINATION—A 62.

FIVE years ago the American Standards Association assigned to a voluntary Committee the investigation of dimensional co-ordination. In August, 1941, was published the first report of this committee, A.S.A. Project A62 for Co-ordination of Dimensions of Building Materials and Equipment. Recently, the first American Standards A62.1 and A62.2 to provide for dimensional co-ordination have been circulated for review. We, in Britain, are invited to comment; what are our reactions?

The Report describes in detail the economies and other advantages which will result from dimensional co-ordination, and there can be no disagreement with these fundamental benefits. The differences of opinion lie in the method chosen to implement co-ordination. The difficulties are both technical and commercial—technically, in the sense of evolving a practical scheme, and commercially dependent on the co-operation of the many competing building industries. We believe that, provided a sound practical scheme can be evolved in the technical sense, there will be no great difficulty in gaining commercial support, both willing and enthusiastic. The main problem, therefore, is a technical problem, and A62 attempts to provide an answer.

In A62.1 are established the principles put forward in the earlier Report, A62, which are now fairly well known. The 4-in. module is accepted as the basis for co-ordination, and will apply to sizes of parts, assemblies and layouts governing both vertic l and horizontal dimensions. This modular dimension is nominal and is applied to a system of centre lines and not to actual over-all sizes. Thus allowances for fixing are included in the module. This means that a 4-in. design grid defines the location of building parts and that building elements may not necessarily be exact multiples of 4 in. A62.1 further establishes definitions, methods of defining location of parts, the marking of approved modular details, etc., and includes descriptive notes on the proposed methods of co-ordination.

Thus, the stage is set for the consideration of standards dealing with individual products, and A62.2, recently issued, is the first. Headed "American Standard Basis for the Co-ordination of Masonry," it establishes the principles which will apply for masonry, masonry being defined as structural materials laid up in mortar and includes, therefore, materials such as brick, concrete block, structural tile and stone. A62.3, which will follow will be a true application standard and will include standard co-ordinated brick and tile sizes. The scheme in America is, therefore, a reality, and we in this country must make up our minds.

Dimensional co-ordination is defined as "a relationship between the sizes and dimensions of building parts that will permit their assembly during field erection with a minimum of cutting or alteration." The critics of the project can be divided into two broad groups, omitting those who can foresee no advantages whatsoever to be gained from some form of dimensional standardisation. First, there are those who quarrel with the 4-in. module, but concur with the details of the scheme generally. They point out that already building elements mostly follow a modular system, the smaller elements a 1-in. module, and the larger elements a 1-ft. module. It is argued that the 1-in. module has proved to be useless, and, whilst agreeing with Bemis and A62 that 4-in. may be useful as a basic grid, maintain that a dimensional standard should be proportional to the size of the building unit. A super-imposed module of 40 in. or 10 times 4 in. is suggested as the solution. Others maintain that in this country the majority of building units already conform to a 3-in. module, due to the traditional influence of the brick, and that it will be unwise to ask a lot of manufacturers to change to 4-in., when the advantages of doing so may not be very apparent.

The second group, however, are much more critical, and find fault with the very fundamentals. It is maintained that co-ordination as defined above can be had without the necessity of fixing a definite modular dimension. The present standards, now under consideration at the B.S.I. and promoted by the Ministry of Works Standards Committee, are given as examples where building elements are co-ordinated in groups, one group being windows, window cills, and boards, lintels and sub-frames for varying materials whilst sanitary appliances, fittings and plumbing dimensions form another group. It is maintained that directly an arbitrary dimension is conceived, irrespective of function, then all kinds of difficulties follow. Clay ware products are particularly difficult and materials such as roofing tiles are made to sizes consistent with the average physical characteristics of clays.

Again, certain elements require dimensional tolerances that would make it impossible for them to take their place in a rigid dimensional system. Floor quarries require a tolerance of something in the nature of plus or minus $\frac{1}{16}$ths in. for 9 in. by 9 in. tiles, giving a total deviation of $\frac{1}{8}$ths of an inch. Products of this sort cannot be expected to line up accurately with other elements. It is difficult, in fact, to foresee how finishes such as linings, plaster and wall tiling thicknesses fit into the scheme. Floor and partition dimensions must be related to weight, performance and stability. In fact, these limitations are admitted in A62.1, and thus one of the greatest advantages of the project is lost, for equipment and facings cannot be designed to fit into interiors any more readily than without such a scheme.

Further, elements whose dimensions are determined by structural requirements, such as reinforced concrete and steel work, would be difficult to co-ordinate, whilst materials whose thickness is related to function, such as D.P.C.'s, cannot be related.

This is the kind of argument put forward rightly or wrongly by critics, but there is a very strong body of sympathisers who claim to have the solutions to all these problems. Thus, manufacturers who have, so far, followed the policy at present adopted at the B.S.I., are becoming anxious. They find that the clay products industry and concrete block manufacturers in America have decided by vote to follow the procedure laid down in A62. The Mission appointed by the Minister of Works to visit the U.S.A. have, in their report, recommended that investigation be instituted into modular standardisation based on a common dimensional unit, and steps to implement this should be taken immediately. There are so many authoritative personalities to be found for and against that the issue requires proper investigation.

An authority such as the B.S.I. or M.O.W. Standards or Codes Committees, should be responsible for setting up a representative sub-Committee to give an authoritative verdict. If there is anything in dimensional co-ordination, now is the time to translate abstractions into practical solutions, or the opportunity is likely to be lost for a very long time. If not, the sooner the industry is told, the better.

NOTES AND NEWS

Demobilisation and Post-war Employment.

THE Royal Institute of British Architects propose to form a Card Index (applicable to architects normally domiciled in the United Kingdom) which will be available to all Registered Architects in addition to members, students and probationers of the R.I.B.A., members of the Allied Societies and of the Architectural Association.

The primary object of the Index is to provide the information required to ensure that those demobilised from the Forces, or released from other forms of national service, are given every opportunity of obtaining suitable employment where such is available.

Registered Architects who are not members or students or probationers of the bodies mentioned, but who wish to avail themselves of this scheme, should make application to the R.I.B.A. for a copy of the necessary questionnaire to be sent to them. They should complete the questionnaire and return it as soon as possible to the R.I.B.A. so that the particulars may be included in the card index.

The Birthday Honours.

To the architectural and allied professions—which receive on this occasion well-deserved recognition — the outstanding award in the King's Birthday Honours list is the O.M. conferred on Sir Giles Scott. The second architect only (Sir Edwin Lutyens was the first) to receive this great distinction, Sir Giles's selection will give satisfaction to the entire building industry, which recognises in him not only a great architect but a constructor deeply concerned with fine building and craftsmanship, and as a result one who sees the building industry not as a collection of individual professions and trades but as a unity. In offering him our congratulations we know we shall have the complete support of the industry. Knighthoods go to Mr. Arthur Clapham, the Secretary of the Royal Commission on Historical Monuments; Mr. Alfred Munnings, P.R.A.; and Professor Charles Herbert Reilly, the abiding inspiration of the Liverpool School of Architecture. To all three we offer our sincere congratulations, as also to Mr. George L. Pepler, whose award of the C.B. marks nearly 40 years of town planning endeavour, in which unrivalled technical knowledge allied to a great understanding of the human factors involved have done so much to bring order out of civic chaos. We have been looking up a masterly analysis of the old Regent-street by Mr. Pepler which appeared in *The Builder* for October 1, 1910. Here appear the still significant sentences: "Mr. John Burns's Town Planning Act wisely, no doubt, keeps within present public opinion in omitting to provide for architectural control, but it is pretty obvious that, unless this power is quickly given we shall not have satisfactory planning. . . . Architectural control should be used to preserve as well as improve." C.B.E.s go to Mr. G. M. Carter, Director of Emergency Works and Recovery, M.o.W., and to Mr. H. F. Cronin, Chief Engineer, Metropolitan Water Board; while the O.B.E. is conferred on Dr. F. M. Lea, Assistant Director of Building Research, D.S.I.R.; Mr. R. A. H. Livett, A.R.I.B.A., Leeds Housing Director; and Mr. W. A. Rutter, Assistant Director of Works, M.o.W. M.B.E.s go to Mr. R. J. Atkinson, Architect and Surveyor to the Evesham R.D.C.; to Mr. A. Marshall, Assistant Director of Emergency Works and Recovery, M.o.W.; and to Mr. R. H. Briggs, who, while not known to the building industry at large, has nevertheless earned the gratitude of the technical Press for the able and efficient manner in which he has interpreted the M. of I. technical censorship.

Towards a Real National Theatre.

ON Thursday next, June 22, the Town and Country Planning Association's members will hear Miss Sonia Dresdel, who is playing the leading part in "This Was a Woman," speaking on "Towards a Real National Theatre." The meeting will be held at 1.15 p.m. at 2, Savoy-hill, W.C.2, and will be preceded by a buffet luncheon. Mr. Lewis Casson will take the chair.

Miss Dresdel wants to see a National Theatre take the form of a theatre which is really alive in all the smaller towns throughout Britain. She does not think that a truly National Theatre will be achieved only by erecting a building in South Kensington, although such a building would be of the very greatest value in other directions. The small town has in the past played an important part in our national culture and economy. "It can do so again," states the Association, which adds: "Planners, architects, local authorities and all those interested in the arts must see to it that buildings to meet the needs of the theatre and all the other arts are not neglected in this development when the time comes."

"Bristol Replanning."

IN connection with the proposed replanning scheme for Bristol illustrated in our last issue, Mr. J. Nelson Meredith, F.R.I.B.A., City Architect, writes: "The shopping precinct was designed in my department, but the layout plan of central area is a joint effort of the Town Clerk, City Engineer, City Estates Surveyor, Town Planning Officer and City Architect, the drawing being prepared in the town planning department. Incidentally, the City Engineer is Chief Planning Officer."

M.O.W. Appointment.

THE Minister of Works has appointed Mr. Hubert M. Fairweather, F.R.I.B.A., to be chairman of the Codes of Practice Committee for Civil Engineering, Public Works Building and Constructional Work, in succession to the late Sir Clement Hindley.

Boys' Home in New Forest.

MR. W. S. MORRISON, Minister of Town and Country Planning, has now given his decision in the appeal of Dr. Barnardo's Homes National Incorporated Association against the refusal of the New Forest Rural District Council to permit the use of the residential building, "Annesley," Bank, nr. Lyndhurst, as a Boys' Home. The Minister proposes to allow the appeal subject to the condition that the total occupation of the premises should at no time exceed 50 persons, including children and staff.

An Appointment.

MR. GWILYM J. DAVIES, Llandyssul, has been appointed assistant architect under the Cardiganshire County Council.

Professional Announcement.

MR. E. MEREDITH, F.R.I.B.A., of Victoria House, Goodmayes, Essex, is opening a branch office at Mynytho, Pwllheli, N. Wales.

From *The Builder* of 1844

Saturday, June 15, 1844. Price 3d.

MR. ROMEO COATES then said that he had a motion to make on the subject of the bridge. Waterloo Bridge was the finest structure of its kind in the world. As a specimen of beautiful architecture it stood unrivalled; but it was similar to the Irishman's benefit, which was all loss and no gain. . . . This was an age of speculation. The bridge had cost two millions of money. . . . He would therefore propose that the bridge should be disposed of by means of a public lottery, and his scheme was this—they should issue 1,000,000 tickets at a guinea each, and the prizes should be limited to 50, the fortunate holders of which should be compelled to sell the bridge to the Government on the best terms they could, on the condition that it should be thrown open to the public.

*** The bridge, originally named the Strand Bridge, was at that time usable only by toll. Nothing came of Mr. Coates's ingenious suggestion, which may have been inspired by Adam's successful venture at the Adelphi.

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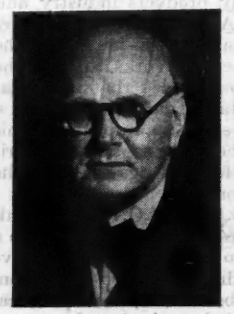

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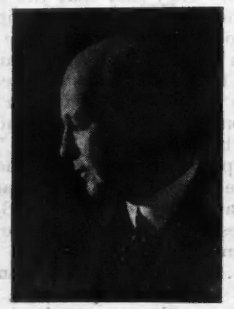
PROFESSOR C. H. REILLY



O.M.
SIR GILES SCOTT

C.B.
MR. GEORGE L. PEPLER

SOME DISTINCTIONS IN THE BIRTHDAY HONOURS.

UTILISING OBSOLETE HOUSES.

By H. V. LANCHESTER, F.R.I.B.A.

THE difficulty of making adequate provision for the anticipated post-war demand for housing accommodation has led some of the provincial cities to investigate the possibilities of converting large houses which, owing to the probable shortage of domestic service, have become obsolete as single family residences, into convenient, small flats. Many of these cannot be regarded as appropriate for such treatment, and it may be possible to use them for different purposes, but on the other hand a large proportion are capable of adaptation, and the problem becomes the extent to which it would be economically practicable to provide such reconstructive proposals as would afford dwellings of suitable size, conveniently arranged and giving reasonable safety from fire, for the increased numbers who would occupy them.

It should be laid down that each flat should include a small kitchen, a bathroom and its own sanitary accommodation, that the entrance and stairway should be fire-resisting, and that a lift should be included, at any rate if the building were more than three floors in height. Cheaper forms of conversion, disregarding these stipulations, should be discouraged.

The City of Westminster is now giving close attention to this aspect of post-war housing, probably by reason of the fact that such a large proportion of its area is occupied by large and lofty houses of the type above referred to, as, for example, those of South Belgravia and Pimlico; and other parts of London such as Bayswater and Kensington will probably follow suit where many of the houses are reasonably well built, having a life of some 50 years, a period which jusitfies conversion.

Preliminary negotiations in Westminster have revealed that among the principal bodies of houseowners, the Crown and the Ecclesiastical Commissioners own about 500 houses on short-term tenancies, the Grosvenor Estate over 600, the Cubitt Estate 600 on tenancies expiring within 16 years, and the Sloane Estate 350 on similar terms. It is thought that in addition to these it might be practicable to deal with many others. The owners of such properties that have been approached appear to see many difficulties in providing for suitable conversion but are, to some extent, not averse to co-operation with the Westminster City Council, in a municipal programme. This Council, apart from initiating a building programme for working-class flats, has received from its Public Health and Housing Committee a report which includes the following statement: "The principal housing area of Westminster is Pimlico, where the houses, originally built for single families, have largely become occupied by several families without the houses being suitably adapted for multiple occupation. The Committee expressed the view that works of improvement and adaptation appropriate to the prospective lives of the houses should be undertaken; that further statutory powers would be required by the Council for carrying out these proposals."

This recommendation, together with the results of conferences with the owners, has led to the City Engineer and the Town Planning Consultant taking up the drafting of an outline plan on which, together with a survey by the Medical Officer and the owners' advisers, will be based the scope and nature of the work of adaptation and the approximate life of each house. Houses which have a sufficient life to justify the expenditure involved will be dealt with by one of the following three alternative methods:—

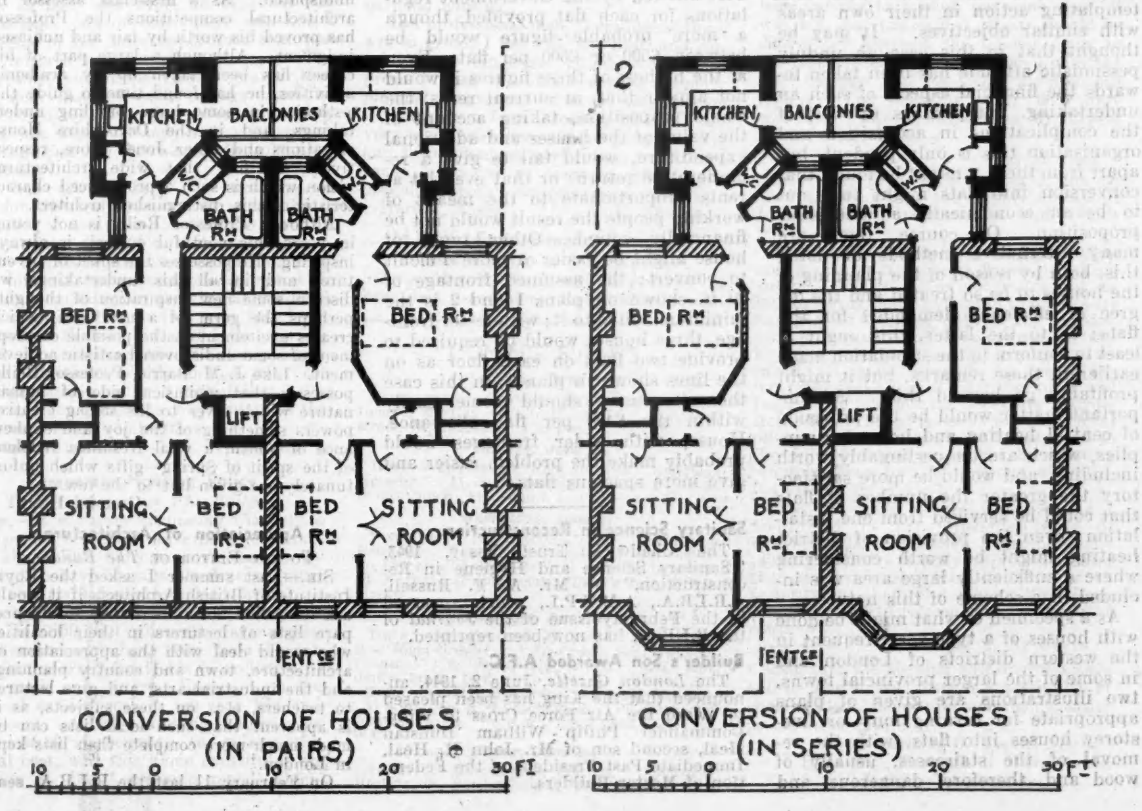
(i) *The Lessees* are given the first opportunity, receiving an extension of their leases. For this purpose the L.C.C. by-laws would require amendment.

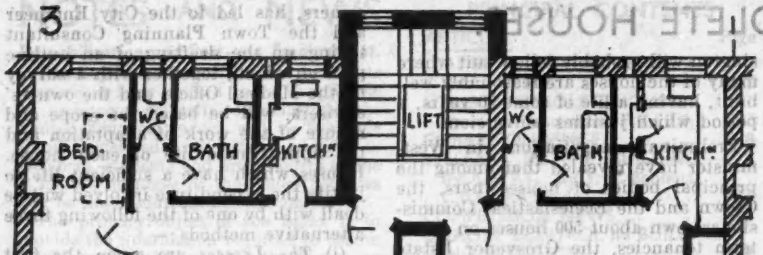
(ii) *The Owners* (failing the Lessees) should be encouraged to do the work on similar lines.

(iii) *The Council* should do the work (in default of both lessee and owner), either acquiring the lease or purchasing the freehold; the Council has powers to do the latter, but would have to obtain them for the acquisition of leases.

It is considered that a national subsidy will be required as in many cases, conversion might well prove an uncommercial proposition; it is pointed out that at present the Council is carrying on this type of work at the cost of the Exchequer under Circulars 2,845 and 2,871. In estimating the financial return on expenditure the question of the use of basements arises. In some houses these can be made to comply with the Health Regulations for occupation, but in others they would only be used for purposes incidental to the occupation of the upper floors.

Westminster has indicated the importance that it attaches to this aspect





of the housing question by engaging three architects in independent practice to reinforce the work of its own staff—namely, Messrs. Joseph, Mr. Victor Wilkins and Mr. Eugene C. Kent, and also proposes to provide an adequate body of clerks of works.

These details of procedure have been given at some length as they may be of service to other authorities contemplating action in their own areas with similar objectives. It may be thought that in this case an unduly pessimistic attitude has been taken towards the financial aspects of such an undertaking, but perhaps in view of the complications in acquisition and organisation this is only prudent, but apart from these it might be found that conversion into flats might turn out to be an economically advantageous proposition. Of course, there are many alternative methods of doing this, both by reason of the planning of the houses to be so treated and the degree of efficiency demanded for the flats; as to the latter, this ought at least to conform to the stipulation made earlier in these remarks, but it might profitably go beyond this. An important matter would be the provision of central heating and hot-water supplies, which are unquestionably worth including, and would be more satisfactory the greater the number of flats that could be serviced from one installation; even the provision of district heating might be worth considering where a sufficiently large area was included in a scheme of this nature.

As a specimen of what might be done with houses of a type very frequent in the western districts of London and in some of the larger provincial towns, two illustrations are given of plans appropriate for turning four- or five-storey houses into flats, with the removal of the staircases, usually of wood and, therefore, dangerous, and the rebuilding of the back portion of the premises. In each of these plans the new building work is approximately 44,000 cubic feet for eight flats, including the basement not counted as a flat. Under possible building conditions the 5,500 cubic feet per flat might be carried out, together with the subsidiary alterations, for the sum of £400 allowed by the Government regulations for each flat provided, though a more probable figure would be between £500 or £600 per flat. Even at the highest of these figures it would not appear that, at current rents, the whole proposition, taking account of the value of the houses and additional expenditure, would fail to give a remunerative return; or that even let at rents proportionate to the means of working people the result would not be financially sound. Other types of house might be easier or more difficult to convert; the assumed frontage of 20 ft. shown on plans 1 and 2 is the minimum suited to it; with lesser frontage, three houses would be required to provide two flats on each floor as on the lines shown in plan 3; in this case the alterations should come easily within the £400 per flat allowance. Houses with wider frontages would probably make the problem easier and give more spacious flats.

Sanitary Science in Reconstruction.

The Chadwick Trust Essay, 1943, "Sanitary Science and Hygiene in Reconstruction," by Mr. A. F. Russell, A.R.I.B.A., A.M.T.P.I., which appeared in the February issue of the *Journal* of the R.I.B.A., has now been reprinted.

Builder's Son Awarded A.F.C.

The *London Gazette*, June 2, 1944, announced that the King has been pleased to award the Air Force Cross to Wing-Commander Philip William Dunstan Heal, second son of Mr. John H. Heal, Immediate Past President of the Federation of Master Builders.

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

"Vacancies for Architects."

To the Editor of *The Builder*.

Sir,—"Official Architect" must surely have had his tongue in his cheek when he replied to Major G. B. J. Athoe's very timely letter of protest in your issue for May 19. He astutely conceals from the public the fact that one-half the members of the R.I.B.A. obtained their "diplomas" by qualifications not one jot better than those held by men who are being denied even the right to apply for a job. What a salute to the soldier!

Frank H. Bromhead,
Retired A.R.I.B.A.

Parkstone, Dorset.

Professor Reilly's Knighthood.

To the Editor of *The Builder*.

Sir,—As a former student of the Liverpool School of Architecture, will you kindly allow me a brief space to express my high gratification (shared by many others) by the knighthood just conferred on its former head—Professor C. H. Reilly?

Such an honour is truly justified, as Professor Reilly ranks among the greatest architectural personalities of this century. As all the world knows, he came to Liverpool an unknown man, occupied the Roscoe chair in architecture when the school was at its lowest ebb, and in the course of twenty-five years established it as one of the finest training grounds in Europe. Many of its past students now occupy some of the best architectural posts throughout the Empire, and the list of its former Rome scholars is unchallenged.

Professor Reilly's gifts are not confined to architectural education, for his brilliant capacity in the sphere of journalism is undisputed. As a first-class assessor in architectural competitions the Professor has proved his worth by fair and unbiased judgment. Although a large part of his career has been taken up by academic activities, he has found time to guide the æsthetics in some large building undertakings, and in the Devonshire House elevations and Peter Jones Store, respectively, we find that wide architectural vision which is such a pronounced characteristic of this distinguished architect.

Although Professor Reilly is not young in years, his youthful outlook is always inspiring. He possesses the spirit of adventure, and in all his undertakings we discern some new inspiration of thought, perhaps the germ of a new idea, which creates excitement in the possible development of some undiscovered artistic achievement. Like J. M. Barrie, Professor Reilly possesses that whimsical side of human nature which gives to his strong creative powers something of the joy and exuberance of youth, a vital freshness redolent of the spirit of Spring—gifts which unfortunately are given but to the few.

Gordon Hemm.

Appreciation of Architecture.

To the Editor of *The Builder*.

Sir,—Last summer I asked the Royal Institute of British Architects if it would ask its Allied Societies if they would prepare lists of lecturers in their localities who would deal with the appreciation of architecture, town and country planning, and the industrial arts, and give lectures to teachers, etc., on these subjects, as it is apparent that such local lists can be made much more complete than lists kept in London.

On February 11 last the R.I.B.A. sent

a circular letter to its Allied Societies and branches thereof in Great Britain and asked for their help in bringing its list of lecturers up to date. It also mentioned that it was possible that the societies might in the near future be called on to supply lecturers to local education authorities to speak to teachers and others on the appreciation of architecture, town planning and the industrial arts.

The Berks, Bucks and Oxon Architectural Association followed up this letter with one of its own. In response, it has received several appreciative letters from Allied Societies, and a list of lecturers in Berkshire has now been compiled, copies of which are being sent to the two local education authorities in the county, also to the Army Directorate of Education, the Berks branches of the Workers' Educational Association, and the National Federation of Women's Institutes.

As I am sure will be realised, if similar lists are prepared shortly to cover all parts of the country, it would be extremely valuable in helping forward the widespread movement to educate the public in the appreciation of good design. The annual report of the C.E.A.P.E. recently issued shows the rapid progress of this movement. Since the issue of that report information has been received of several more lecture courses and of a conference at Cheltenham.

It appears that only by getting the teaching of the appreciation of good design right into the general educational system of the country, as a background subject, will it be possible to improve public taste.

C. B. WILLCOCKS,
Hon. Secretary, C.E.A.P.E.
The Planning Centre,
28, King-street, W.C.2.

Northampton Rural Housing Competition.

TO THE EDITOR OF *The Builder*.

SIR,—I read with much interest Mr. A. G. Allnutt's letter in your issue of May 19 last, and while his criticism was principally one of cost, there was one I consider of far more importance that was not referred to—viz., that of area. The published conditions clearly stated that the floor area of each cottage must be limited to 1,000 sup. ft., a very important condition, which not only had an important bearing upon cost, but also curbed planning facilities.

It has always been the practice of London district surveyors, of whom, until recently, I was one, to include in the ground-floor area of a building all one-storey additions, disregarding whether they had internal communications or not with the main building, in arriving at the total area upon which their fees were based. It is obvious that in his award the assessor erred in regarding the one-storey washhouse addition directly linked with the building proper as an "outbuilding."

This, I consider, was very unfair to the vast majority of competitors.

Thames Ditton. A. L. WOODWARD.

Temporary Housing Policy.

TO THE EDITOR OF *The Builder*.

SIR,—It is rather surprising that up to now so few criticisms have been forthcoming about the Government's temporary housing policy, because reflection must show that its defects are indeed several.

Firstly, the question of cost, which is given at £550, but when the various proposed amendments have been made this can be taken at £600, and this is exclusive of land, roads and sewers. However, on the basis of a £600 cost, a ten-year life and 3 per cent. interest, a sinking fund of over £1 per week is necessary to redeem the capital cost, and this alone constitutes an addition to the "economic rent," which would not occur in a permanently constructed house with a normal span of life.

The interference with the permanent housing programme will be substantial. The preparation of the sites, the construction of the roads, the laying of the sewers and the external services generally will have to be carried out for the temporary programme in the same way as if the effort were devoted to the permanent programme. In the house itself the windows, the doors, the bath, basins, cooker, the refrigerator—in fact, all the fittings—could be incorporated in a permanently built house, and therefore the only real saving is in the shell of the house, which is to be pressed steel instead of brick or stone. Speed is claimed as an important factor, but against that has to be offset, therefore, the delay in the final permanent housing of the people due to duplication of the programme.

What about the siting of the houses? The guiding principle in this direction must be that the best and most convenient sites must be reserved for the permanent programme, and as already in the large towns there is a flat-versus-house problem due to transport difficulties, it is evident that this is going to be accentuated by a temporary programme, which can therefore only be carried out on less convenient sites.

From an æsthetic point of view, the prospect is appalling. Whilst the appearance of the hutment in itself may not be objectionable, reproduced in mass the result will be one of drab monotony. What is to happen to the cleared sites? If the land is not restored, then a permanent eyesore will be created and a waste of land result. If the land is to be restored, then this constitutes an appreciable addition to the cost of the scheme.

The chief advantage of the scheme would appear to be the possibility of selling the houses to rehabilitate devastated Europe, and whilst this may be a factor as far as our export trade is concerned, it is not a relevant consideration for satisfactory national housing.

As a professional man, therefore, with no axe to grind, I feel that the best, and certainly least dangerous, policy would be to proceed from the outset with a properly planned programme of house construction in permanent form because, unless I am very much mistaken, the people generally, and town planners particularly, will have cause for regret in years to come if the present proposals are proceeded with.

Harlow, Essex. E. STERNE.

M.O.W. Factory-made Bungalow.

TO THE EDITOR OF *The Builder*.

SIR,—Mr. R. V. Boughton's letter in your last issue does really attack with vigour and the utmost fairness, and will do a lot of good. Your correspondent, one notices, describes the M.O.W. bungalow as "*factory-built* temporary" and the house as "*works-built* permanent." It is obvious that Mr. Boughton has noticed but little difference in the meaning "*temporary*" and "*permanent*" owing to both the buildings being prefabricated, despite the words "*factory-built*" and "*works-built*" being used. Could your correspondent now give his opinion as to the difference in life of the bungalow and house?

KENTISH BUILDER.

COMING EVENTS

Saturday, June 17.

INSTITUTE OF QUANTITY SURVEYORS. Annual General Meeting. White Horse Hotel, Congreve-street, Birmingham. 1.30 p.m.

Tuesday, June 20.

HOUSING CENTRE. Mr. Rudi Mock on "American Housing." 13, Suffolk-street, S.W.1. 1.15 p.m. (buffet lunch, 12.45 p.m.).

Wednesday, June 21.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Paper on "Commercial Thermostats in Theory and Practice," by Mr. R. Grierson. At Mechanical Engineers, Storey's-gate, S.W.1. 6 p.m.

Thursday, June 22.

TOWN AND COUNTRY PLANNING ASSOCIATION. Miss Sonia Dresdel on "Towards a Real National Theatre." 2, Savoy-hill, W.C.2. 1.15 p.m. (buffet lunch, 12.45 p.m.).

TOWN PLANNING INSTITUTE. Annual Meeting. 5.30 p.m. Mr. A. J. Lyddon on "Planning and Communication." 6 p.m. Essex Hall, Essex-st., W.C.2.

Friday, June 23.

ARCHITECTS REGISTRATION COUNCIL. Quarterly Meeting, 66, Portland-place, W.1. 2 p.m.

Post-War Housing.

TO THE EDITOR OF *The Builder*.

SIR,—The Government agree that prefabricated houses are a temporary measure, and appear to be proposed solely for the purpose of speed.

I venture to suggest that millions of pounds might be saved and very little time lost if brick-built houses are considered and all brickyards permitted to create huge stocks now (if necessary subsidised by the Government). The houses could then be allocated to all builders in the country in approximate proportion to their 1938-9 turnover. In this way a million houses could be erected in the first year.

Stocks such as doors, windows, etc., could receive priority immediately peace is declared to be ready when the brickwork is up. In the first four months 250,000 houses could be ready by proper organisation.

F. ALEX. HOWICK.

London, S.W.1.

Labour Redistribution.

TO THE EDITOR OF *The Builder*.

SIR,—The medium and small builders have had to go through a very difficult time, owing to the removal of their skilled labour for the Government war programme, and as the large contracts have been coming to a close for some time, it was felt that the skilled labour should be distributed amongst the smaller firms in the trade to enable them to cope with the war damage and essential maintenance repairs. The following letter is a copy of a reply I have received from Mr. Ernest Bevin, P.C., M.P. :—

May 25, 1944.

Dear Mr. Frost,—You wrote to me on May 6, 1944, about the supply of labour for domestic maintenance and repair work.

This matter is receiving close attention and measures have been drawn up which provide for the maximum amount of labour being made available to employers engaged on housing upkeep and repairs, as the exigencies of the Government war building programme are gradually relaxed. It is not possible for me to say when the full effect of these measures will begin to be felt, but the necessary instructions have been issued to my local officers and are already being adapted to the fullest extent permitted by existing circumstances to all questions of building labour redistribution.

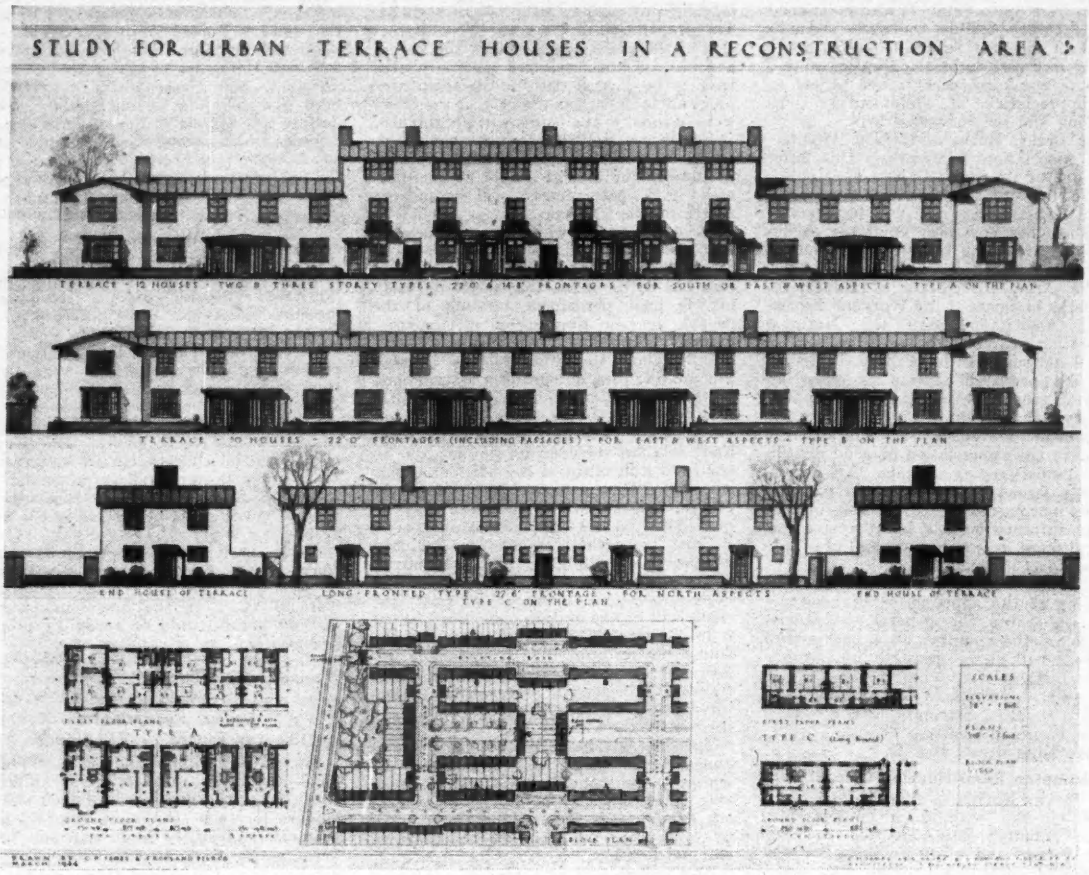
I would again assure you that, as I mentioned in my previous letter of December 23, the burden being borne by jobbing builders is fully appreciated, and that no avoidable delay will occur in restoring to them the labour they have been required to release for essential war purposes.

(Signed) E. N. BEVIN.

I am sure the medium and small builders will be glad to feel there is a possibility of their skilled labour problems being easier in the near future.

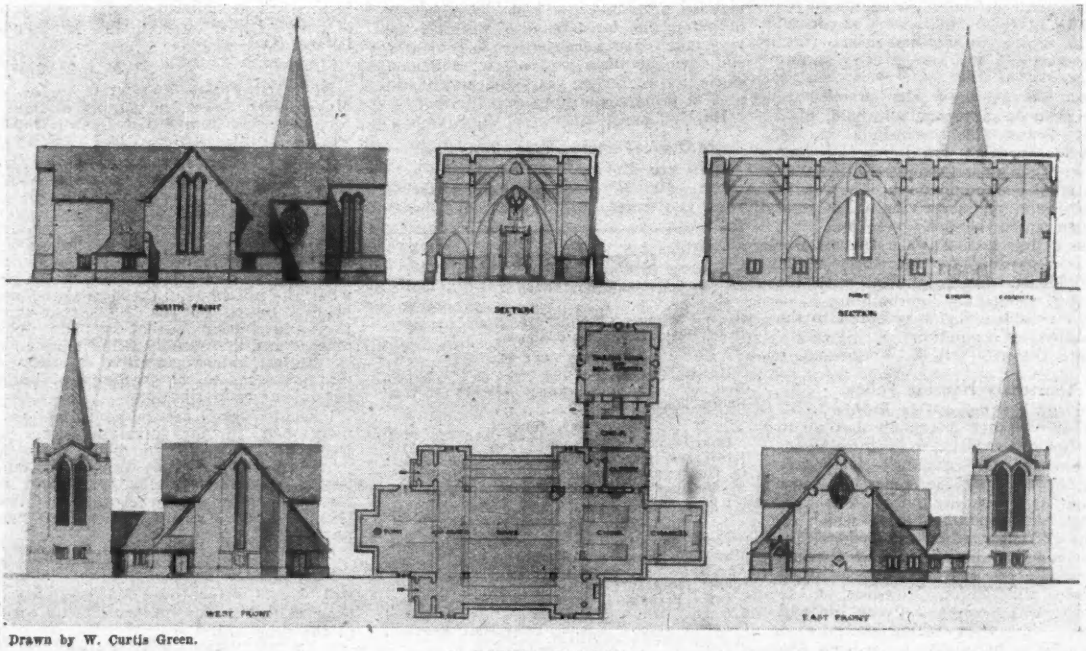
ARTHUR B. FROST,
Hon. Sec., Borough of Wandsworth Builders' Association.

ARCHITECTURE AT THE ROYAL ACADEMY EXHIBITION


STUDY FOR URBAN TERRACE HOUSES IN A RECONSTRUCTION AREA
TERRACE - 12 HOUSES - TWO & THREE STOREY TYPES - 22'0" & 14'8" FRONTAGES - FOR SOUTH OR EAST & WEST ASPECTS - TYPE A ON THE PLAN
TERRACE - 30 HOUSES - 22'0" FRONTAGES (INCLUDING PASSAGES) - FOR EAST & WEST ASPECTS - TYPE B ON THE PLAN
END HOUSE OF TERRACE
LONG-FRONTED TYPE - 27'6" FRONTAGE - FOR NORTH ASPECTS - TYPE C ON THE PLAN
END HOUSE OF TERRACE
TYPE A
TYPE C
SCALES

Drawn by C. H. James and S. Rowland Pierce.

C. H. JAMES, A.R.A., F.R.I.B.A., AND S. ROWLAND PIERCE, F.R.I.B.A., ARCHITECTS.



Drawn by W. Curtis Green.

A PARISH CHURCH.

W. CURTIS GREEN, R.A., SON, AND LLOYD, ARCHITECTS.

THE CITY OF SHEFFIELD

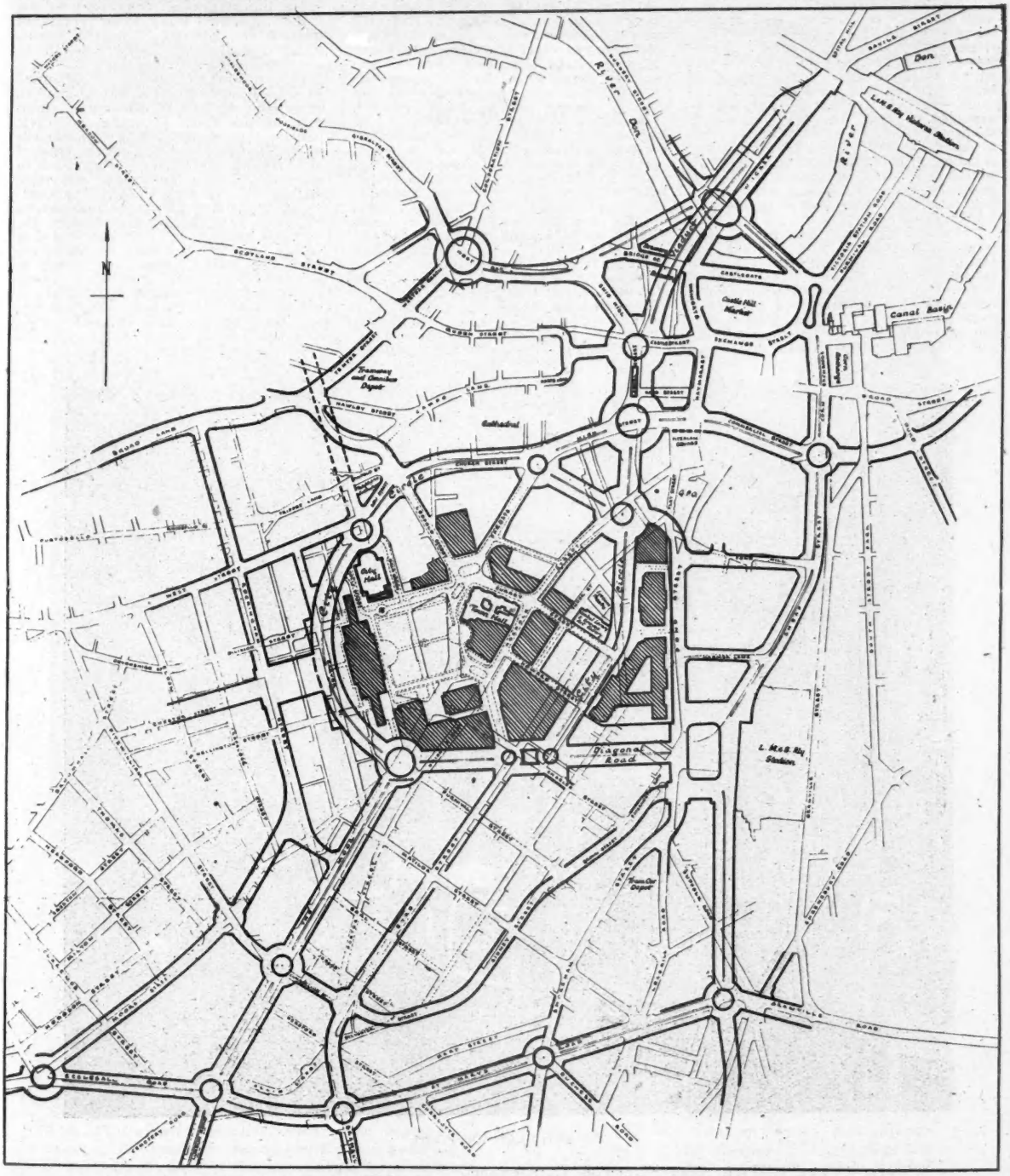
PROPOSED CENTRAL REPLANNING

AN interesting method of securing designs for the replanning of the central area of the City of Sheffield has been put into practice, whereby designs were invited from four individuals or groups—one being the Sheffield and South Yorkshire Society of Architects and Surveyors, and the others being, we understand, Corporation officials. These four designs were reviewed by Mr. Herbert J. Manzoni, C.B.E., M.Inst.C.E., City Engineer and Surveyor, Birmingham.

Mr. Manzoni has now issued a report on the plans submitted and also a plan based on one of the four designs—"Red O," whose authorship is not yet revealed. In this plan (which is reproduced on this page) he has incorporated certain ideas both of his own and of the other three plans, and for this reason he recently visited Sheffield with his Chief Planning Officer, Mr. F. Greenwood, and the latter's senior assistant, Mr. P. E. Goode.

In his report, Mr. Manzoni states:

"It is fundamental that the development of a City will be in harmony with its major characteristics, will reflect the activities of its inhabitants, and will be modelled to meet their needs; this will be so particularly if its development is unplanned by any central co-ordination. Unfortunately, obsolescence occurs in direct proportion to the rate of social progress, and the longevity of English buildings, once so great an asset, has become a main cause of dissatisfaction through the acceleration of scientific progress and the consequent enlightenment of the people. The operation of planning as applied to a town is beset with two dangers—that it will fail to interpret cor-



REPLANNING THE CENTRE OF SHEFFIELD. Design "Red O," with Mr. Manzoni's suggestions incorporated.

rectly and provide for all characteristic and local requirements, and that through failure to take sufficient account of changing conditions it will produce at some time in the future conditions which are required now, but by that time will be out of date.

"From these considerations there emerge two desiderata—first that planning should be done by local people, whose life and interests are bound up with the plan, and, secondly, that the principal and more urgent requirements embodied in a plan should be capable of being carried out rapidly and well within a period during which it is safe to make predictions.

"The centre of Sheffield is compact and well defined, its contours are extreme, its public buildings haphazard and unrelated. It has a high degree of obsolescence, some very good first-class shops and a secondary and popular shopping centre immediately adjoining to the south—this latter has been heavily damaged by bombing. Other secondary shops adjoin the City Centre to the north towards the river. There are factory and commercial premises interspersed with buildings of all types, and the traffic congestion is extreme and has some special features, notably a heavy north-south concentration.

"Similar conditions emerge in most large industrial cities and in every case the key to a successful plan is a satisfactory solution of the traffic problem. Without this you may have the finest buildings in the country—and indeed you have at least one of them already—but the eventual result will not be satisfactory; moreover, it is obvious that traffic congestion is the problem calling most urgently for solution in the City Centre if the life and amenity of this area is to be maintained."

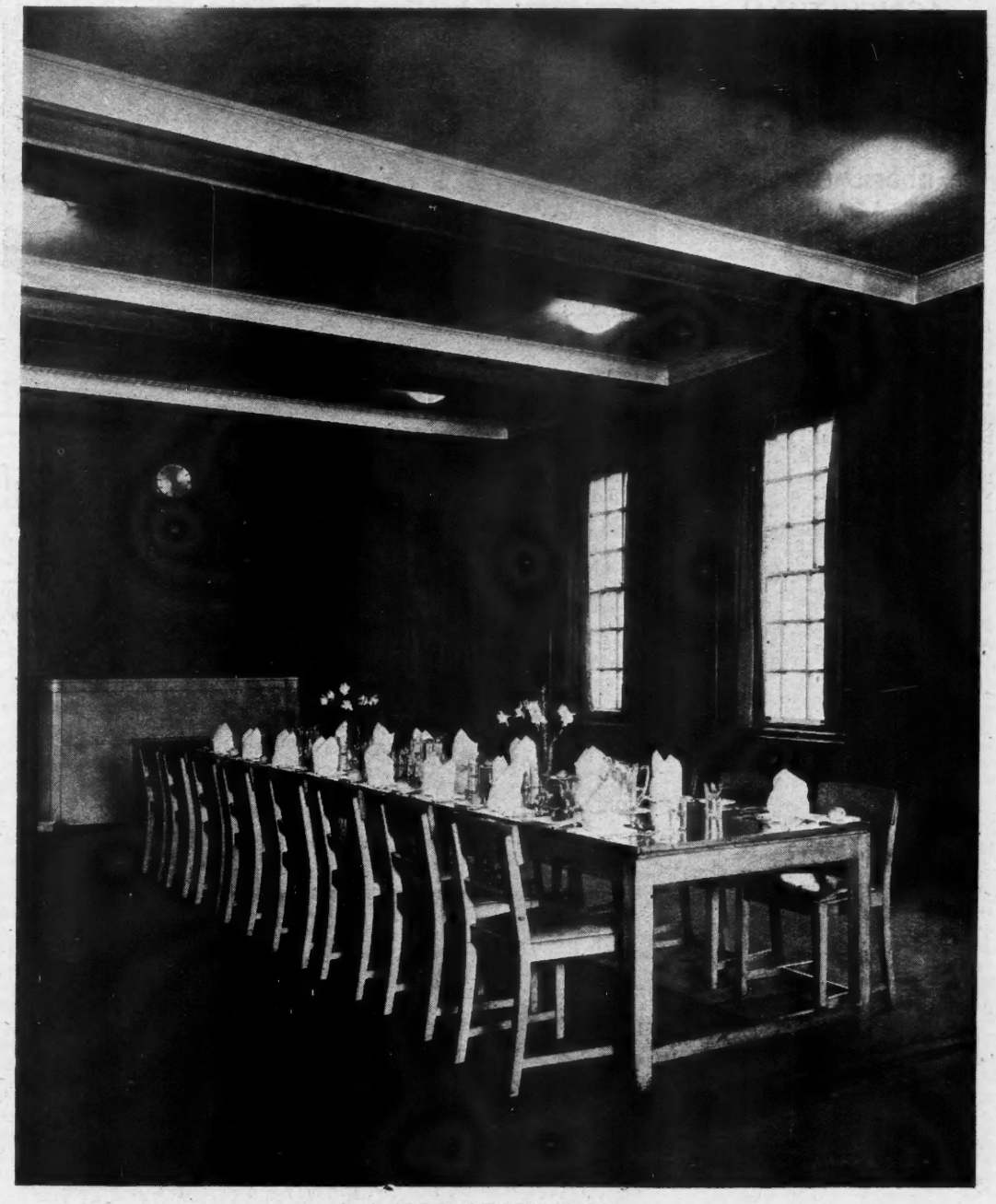
All four of the schemes embody, with small variations, the inner ring road laid down in the Corporation's original scheme. Mr. Manzoni, while considering this ring road a good feature, points out that any scheme of traffic direction and control which relies on restrictions and checks is fundamentally wrong. The best system would be the provision of adequate capacity on radial roads converging on the hub of the town and terminating on a small and capacious ring road, the diameter of which is not more than 600 yards. Mr. Manzoni's solution is shown on the plan. Within the ring road would be the important civic buildings. Mr. Manzoni suggests a new short length of road in the north-east corner of the enclosed area which would relieve the heavily overloaded connecting roads and the roundabout leading to the Wicker. The enclosed central area should not be traversed by public transport and there should be no direct and obvious routes across it inducing traffic to take a short cut. The existing civic buildings which are to be retained are the Municipal Buildings, the City Hall, the Central Library, etc., and additional sites are required for other public and semi-public buildings. Amenity, civic dignity and great individuality are suggested by the grouping indicated by the plan "Red O"—a square enclosing about four acres of gardens and flanked by the City Hall. Town Hall and extension, Municipal Buildings, Law Courts, etc., which would be possible to carry out within a reasonable time and without too much disturbance. To the east, Mr. Manzoni suggests a revised plan for the proposed technical college which would give another square.

Since the principal routes to the north—Fargate, High-street, Haymarket, Waingate and the Wicker is bound to achieve congestion, Mr. Manzoni discards the various suggestions made and proposes that the Wicker should become a double level road from a point near the Wicker Arches to the south side of the river. Such a scheme would require careful preparation in detail. The proposed Circle is suggested as an ideal central roundabout for loading and discharging local 'bus passengers, while a long-distance 'bus station is suggested near the L.M.S. station. Many other points of interest are referred to in the report, which is worked out in much detail.

At a meeting of Sheffield City Council held on June 7, the plan was adopted in principle. Ald. C. W. Gascoigne, chairman of the Town Planning and Civic Centres Committee, urging endorsement of the plan in principle, said the Council were not asked to agree to every detail in it. He thought the most important feature was the City Circle. The Committee had more than once considered a road from the Wicker Arches into the city, but had turned it down because they always felt that would be removing traffic congestion from one point to another. A City Circle would overcome the congestion. It was going to be one of the smallest City Circles in the country. People would find ready access to shops, and would never be more than 250 yds. from the city centre.

THE MEN'S COMMON ROOM.

THE STAFF HOUSE, MANCHESTER UNIVERSITY. HUBERT WORTHINGTON, ARCHITECT.



ONE END OF THE DINING-ROOM

THE STAFF HOUSE, MANCHESTER UNIVERSITY. HUBERT WORTHINGTON, ARCHITECT.

THE STAFF HOUSE OF MANCHESTER UNIVERSITY, which was completed shortly before the war, is a first instalment of a scheme for new Refectories for the University on a large scale. The building was planned on three floors. On the ground floor is an entrance hall, cloak-rooms and lavatories, servery, etc., connected with the main University serveries and kitchen, and a staff dining-room, 40 ft. by 22 ft., which can be subdivided by folded panelling into two rooms for separate smaller meals. The dining-room is lit by five windows, facing south; it is panelled in veneered teak, and the fireplace is built up of polished limestone.

On the first floor there is a joint common room, which is used by men and women members of the staff, and a women's common room, and on the second floor there is a large staff common room, 51 ft. 7 in. long and 27 ft. wide, lit by seven windows facing south, which open on to a balcony. This room is panelled in oak with Travertine fireplaces at each end. The furniture of this room is in oak with red leather. There are "rayrads" in the panels between the windows. These common rooms and dining-rooms add greatly to the amenities of the staff of the University, and it is hoped that the whole scheme may be realised as soon as possible after the war.

AGRICULTURAL COTTAGES, NR. BRIDPORT, DORSET.

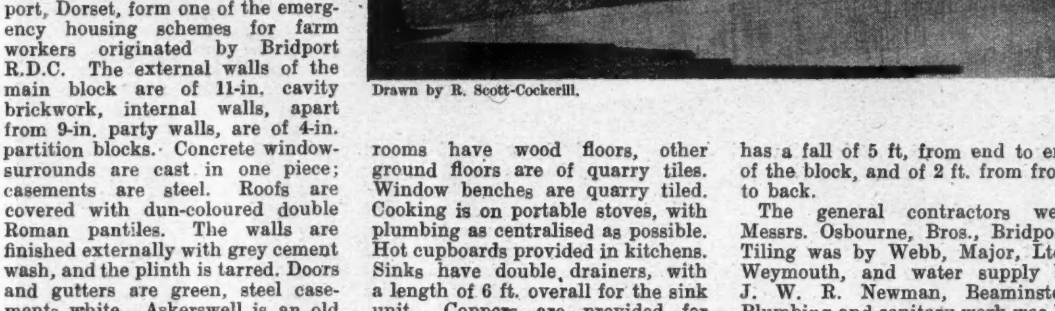
R. LIDDESDALE PALMER, A.R.I.B.A., ARCHITECT.

Drawn by R. Scott-Cockerill.

THESE NON-PARLOUR COTTAGES AT Leggs Mead, Askerwell, near Bridport, Dorset, form one of the emergency housing schemes for farm workers originated by Bridport R.D.C. The external walls of the main block are of 11-in. cavity brickwork, internal walls, apart from 9-in. party walls, are of 4-in. partition blocks. Concrete window-surrounds are cast in one piece; casements are steel. Roofs are covered with dun-coloured double Roman pantiles. The walls are finished externally with grey cement wash, and the plinth is tarred. Doors and gutters are green, steel casements white. Askerswell is an old village, with mostly brown or grey tones prevailing in existing buildings. Care has been exercised to keep the external colours of the new cottages in harmony with the village.

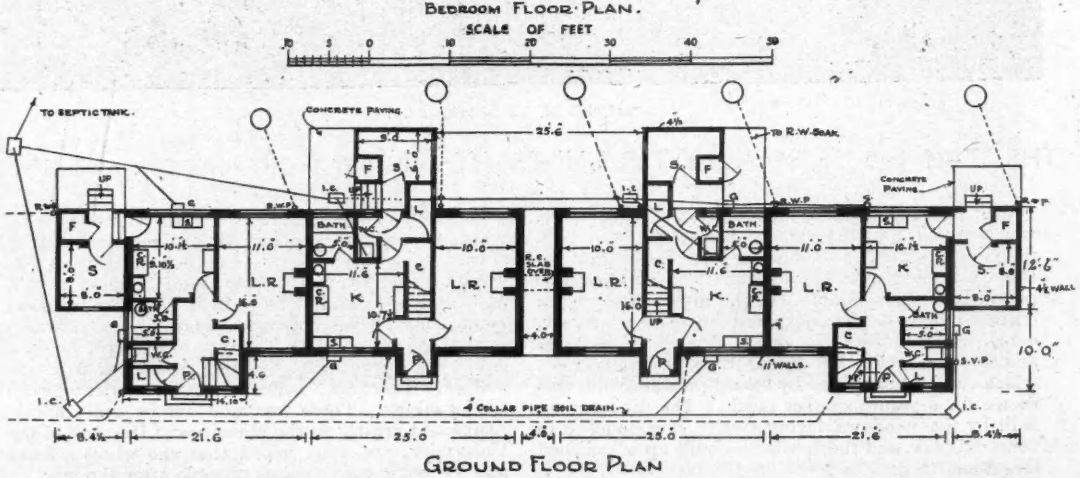
Internally, bedrooms and living rooms have wood floors, other ground floors are of quarry tiles. Window benches are quarry tiled. Cooking is on portable stoves, with plumbing as centralised as possible. Hot cupboards provided in kitchens. Sinks have double drainers, with a length of 6 ft. overall for the sink unit. Coppers are provided for laundry. Dressers, pot-racks, shelving, cupboards, towel-rails, hat and coat hooks are given in all houses. Water supply by gravitation, drainage taken to septic tank. Electricity is not yet available. These houses are now let. The site has a fall of 5 ft. from end to end of the block, and of 2 ft. from front to back.

The general contractors were Messrs. Osbourne, Bros., Bridport. Tiling was by Webb, Major, Ltd., Weymouth, and water supply by J. W. R. Newman, Beaminster. Plumbing and sanitary work was by Cox and Humphries, Ltd., Bridport; tiles were supplied by Colthurst, Symonds and Co., Ltd., Bridgwater; cast-concrete goods by Wharf Lane Concrete Co., Ltd., Ilminster; and Ministry of Works materials supplied by Rowe Bros.



BEDROOM FLOOR PLAN.

SCALE OF FEET



GROUND FLOOR PLAN

WELFARE IN THE BUILDING INDUSTRY

By T. P. BENNETT, C.B.E., F.R.I.B.A.
(Late Director of Works, M.O.W.)

RECENT years have seen a considerable advance in the welfare provided for industrial workers in connection with the factories of stable industries, and particularly the newer industries such as automobile and aircraft production.

Welfare in the building industry has lagged behind the development in more stable industries for several reasons, the principal one being the traditional nature of building, general acceptance by personnel throughout the industry of very rough conditions of living, particularly on country sites and sites away from the amenities of actual town building. The acceptance of these rough conditions was so firmly established that as late as 1941 the majority of contractors and their agents and a large number of the men considered that no improvement was necessary and that the conditions existing were acceptable to all parties.

The intimate knowledge, however, of those most closely connected with exposed sites intimated quite clearly the disability which was suffered by both the men and the contract when continued exposure to adverse weather conditions, poor feeding and unsatisfactory sanitary conditions increased the sickness rate and often rendered men unable to work to full capacity during the hours which they were being paid for maximum production.

The necessity for a higher standard of welfare was greatly intensified as the younger men were withdrawn from the industry, unemployment was virtually eliminated and the personnel of building works contained a high proportion of men with physical disabilities and of men who were of the higher age groups.

The reason for the delay in the development of adequate welfare on building sites needed some investigation, and it was to be found very largely in the fact that for many years the building industry had an unemployment index figure of approximately 200,000 men, that the contractor therefore had a wide choice of personnel, and employed only the most hardy, the most physically capable and the most efficient. The State, on the other hand, provided, by means of unemployment pay and sickness benefit, for the men who were unable to be themselves producers. In the national economy this imposed a very heavy burden on the State while allowing private enterprise to earn a maximum profit and to carry out its work at the lowest cost.

Gradually attention was focused upon the desirability, if not necessity, for securing from men who could not give 100 per cent. output measured by the highest standards the maximum contributions of which they were capable in return for any payment given, and it was no great advance from this position to realise that once the employer had to find work, and pay these men under the terms of his contract, it was in the employer's interest to provide conditions of working which would enable the maximum number of men to remain at work under the best possible conditions for production.

Welfare was crystallised when in February, 1941, the Ministry of Labour produced Factory Form 1892. While this form had no legal obligation it was possible for the Ministry of Labour to say that they were not prepared to supply men to contracts unless conditions were available on the site approximating to Factory Form 1892, and it therefore became necessary to draw up rules for the practical application of 1892 and to enforce these rules as far as possible on all building sites.

The result of two years of experience has shown the benefit of welfare regulations of this character and there are few contractors or agents to-day who are not fully convinced that welfare reasonably interpreted and properly executed has been an immense advantage to building contracts and, in fact, under war conditions few, if any, of them could have been carried out successfully without the provision of welfare of an acceptable type.

There is a long-term value in welfare of considerable importance. The working conditions of an industry very largely dictate the quality of the entrant who can be recruited, and if post-war industries return to a condition in which the individual has a choice at the date of entry, then boys will choose and fathers will direct their sons into those industries which have good working conditions as well as good wages, and it is obviously of the greatest importance to the welfare of building as a whole that the type of man recruited for both craftsmen and labourers should be as high and intelligent a type as possible.

While, therefore, welfare has hitherto been applied largely, indeed almost entirely, on Government contracts, peace time will bring with it realisation that the private owner and the individual contractor can secure a great deal of advantage by maintaining the level of welfare which war time has established.

Under the majority of headings, this will apply to the buildings erected in towns as well as those erected in the country, although the absence of public or external amenities in the latter case will emphasise the necessity of welfare more forcibly than it will be emphasised in the town building where the workmen can secure some of the advantages of British Restaurants, public transport, and other aids to good living which the community as a whole may provide for everyone.

The examination of welfare, as described in Factory Form 1892, gives the following headings which call for the provision of accommodation or of services: Sanitation, drying rooms, first aid, feeding of workmen, housing of workmen, recreation for workmen.

Sanitation.

Sanitation on an open site should be provided to a standard which has now been stabilised in accordance with the following schedule:—

Elsan or other closets—1 per 25 men or 1 per 30 men where urinals are separate.

Basins enamelled 16 in.—1 per 5 men.

In most cases this provision will be by Elsan or similar closets, and the same standard will be needed in town buildings as in country buildings. The standard of maintenance has needed constant supervision and has recently become high. Every effort should be made to maintain it in this position. The old elementary trench with a pole, and the unsatisfactory arrangement often made in town buildings, should be eliminated and really adequate provision of the type indicated become universal on all contracts.

The provision of washing accommodation, like many other reforms, has been only slowly appreciated by the men themselves, but there is every indication that as they become used to a proper standard of cleanliness the washing accommodation will be fully used.

Drying Rooms.

The problem of allowing men to go home in dry clothes has by no means been overcome. When drying rooms are provided it becomes necessary to put them in charge of a responsible man to avoid theft and to institute a new system of receipt and issue. Many of the men are reluctant to leave their clothes in the drying room, and there has been a tendency for certain contractors to consider that the drying room and the cost of an attendant is largely wasted, and to discontinue the use of the drying room.

This provision is much in the same condition as that of washing. Continued use will accustom the men to leave their wet coats with the attendants in the morning, to change their wet clothes and leave them in the evening to be dry, ready for use, on the following morning.

There has been a substantial increase in the provision of rubber boots, sou' wester hats, and some type of waterproof suit so that men necessarily working in the open are properly protected from the weather. The cost of issuing this clothing has become an appreciable item. On the most efficiently run contracts the cost has been reduced to a minimum as has also the loss of time, but the industry still needs to study the matter more closely and to arrive at a standard which will deal with both time and cost factors.

First Aid.

Building has for many years had a first-aid box. With the increased employment of men above the peak ages of physical fitness, first aid has increased substantially in importance and much greater provision is needed than was essential in the pre-war days of the employment only of physically fit men.

Proper Feeding of Workmen.

Probably the feeding of workmen has given rise to the greatest amount of difficulty and the greatest amount of cost. The building contract canteen presents the most difficult problem which catering can face. The building site starts with zero personnel, frequently rises to its labour peak within a matter of one to six months and falls in a period of one to six months.

The first dozen men on a contract

need protection and feeding; the last dozen equally need consideration. But at the beginning and end of contracts any satisfactory system of canteens must be run at a loss. In the larger contracts it is possible for the provision of midday meals at low cost to be made without a loss, and it may well be that the building industries must face this provision of satisfactory mid-day meals as other industries are facing them, and regard some subsidy of the cost of the meals as part of its means of securing a first-class day's work from the operative. There is a very strong indication that the industry would be well advised to accept the provision of meals as part of its machinery.

There are a number of ways of providing food. The British Restaurant at present is part of the national machinery and can frequently be used by the building contractor. Where no such public facilities exist the builder has used caterers or built up his own management, and of the two the latter has shown very considerable increase in recent months and generally speaking is by far the most satisfactory.

There are substantial problems in connection with the provision of the necessary equipment and plant throughout the country. The provision of suitable cooks and suitable canteen labour and the whole problem of feeding, therefore, would suggest a close examination on the part of the architects, employers and the operatives to arrive at an acceptable standard of food and price, and to provide a source of supply of equipment and personnel for those contractors who cannot continuously maintain their own at an economic level.

It may well be that some central catering organisation which could be used by the industry at will, would be of assistance to the smaller and, possibly in many cases, the larger contractors.

The provision of food which has presented many difficulties in war time, most of which can be overcome by intelligent handling of the food regulations, will presumably be less difficult when the war is over, but like all catering problems management makes a very large amount of difference to the economic use of food and the amount of waste which is produced, and a good and efficient management can make the greatest possible use of the facilities which are available.

Housing of Workmen.

In the housing of workmen on building sites, special problems are created. Standard plans of canteens have been issued using temporary 18 ft. 6 in. hutting for various sizes of canteens.

The dormitories must be maintained in a standard state of order and cleanliness by the appointment of suitable welfare officers.

If the men are housed on an isolated site where normal public amusements are not available, it becomes essential to provide them with some recreation space, with the provision of wireless, darts, and other games to prevent the men from becoming tired and stale under the somewhat hard conditions of many building contracts.

Site Organisation.

The study of inclement weather should receive much more thought and consideration than has been the case in the past. There is no doubt that recent years have seen great advance in the provision of work under cover for wet days, and general improvement in the organisation of building works to eliminate as far as possible loss of time, and to maintain continuity or operations. There is, however, room for considerable additional organisation in this connection, particularly on open sites. The provision of satisfactory roads early in the contract so that the workers pass to and from their works with reasonable conditions under foot adds greatly to the psychological effect on the men and very largely removes the depression which necessarily results from an endeavour to put up buildings which are constantly saturated with water or covered with mud. The provision of surface water drains, the early roofing of buildings, fixing of glass in windows so that the buildings are reasonably warm in wintry conditions, and the provision of heating often lead to increased output. It may well be that a properly balanced budget would show that the increased output, secured by good working conditions more than balances the increased expenditure which may be incurred in carrying out certain works early in the contract and allowing for maintenance and repair and of adding roads and drainage merely for the purpose of securing speed and efficient output.

Site organisation, therefore, is an achievement of importance in the economy in building which is undeniable, and while in this connection the site amenities are stressed in connection with welfare, this is only one aspect of the site working although it may be an important one.

The provision of artificial lighting was not sufficiently considered in prewar work, and in many cases temporary lighting in winter months has added very greatly to output on sites quite apart from the provision rendered necessary by black-out conditions, and it may well be that in postwar building such artificial lighting would pay for itself as a result of the increased work which would be secured in the first and last hours of many working days and on days which are dull, overcast or foggy.

A Universal Standard.

In arriving at a satisfactory standard of welfare it is of the greatest importance that the standard adopted should be universal, and that men passing from one contract to another should be sure of finding similar conditions on every contract.

The cost of welfare is ascertainable and therefore tends to be regarded with apprehension by architects and contractors. The saving in time, or the increased output of the men, and more especially the preventive nature of good welfare so far as sickness and absenteeism are concerned, are less easy to measure, and the difficult task is presented, therefore, of comparing an obvious tangible expenditure with a less obvious and less tangible production or avoidance of lost time and inefficiency.

With indeterminate factors of this kind, it may not be possible to strike a true balance and the result must largely be left to judgment. Public opinion is very strong, and it considers that men must be provided with good working conditions, and that they are an essential part of building contracts as of every other contract in the country.

In order that welfare might be placed upon an acceptable and standard level, it would seem desirable for the R.I.B.A. to call a meeting of its own members, of the building employers and of the operatives so that an agreed standard of welfare may be laid down for various types of sites; a standard which would be acceptable to all parties and which the architects are prepared to inform their clients should be a proper charge on the cost of the contract. This standard should then be included as a contractual obligation in all contracts and thus any man entering the building industry would know the standard of his working conditions he would encounter and that standard would be maintained at a proper and even level whether the employer was generous or parsimonious and irrespective of the views of individual architects and contractors.

STILL PROGRESSIVE—
ESTIMATING
FOR
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COMPETITION NEWS

Golders Green: New Hospital Buildings.

THE Buildings and Estates Committee of the Manor House Hospital, Golders Green, London, N.W.11, invite architects to submit, in competition, designs for a Women's Section of the Hospital, to be erected on a site in North End-road, opposite the existing hospital buildings.

Accommodation: (a) 72 beds; (b) Outpatients' Department and Dispensary; (c) Nursing and Domestic Staff.

Premiums: £500, £300 and £150. Last day for submitting designs: October 12, 1944. Last day for questions: August 12, 1944. Assessor: Sir Giles Gilbert Scott, O.M., R.A.

Conditions of competition may be obtained on application to the Secretary, The Manor House Hospital, Golders Green, London, N.W.11. Deposit £1.

QUALITY CONTROL OF BUILDING PRODUCTS.

FROM A CORRESPONDENT.

It is now clear that there will be a spate of mass production of building materials and components for the post-war programme. In this production work precision will be of the utmost importance, for one of the advantages of prefabrication is that it facilitates quick assembly by eliminating the need to cut materials to size on the site.

Every effort is being made by private enterprise and by the Ministry of Works to reduce building costs through increased speed and output, while improving standards of equipment and finish. The official approach to the problem has been made through the research programme organised by the Post-War Building Directorate. This programme has resulted so far in: Publication of six of the Post-War Building Studies; The work of the Standards Committee; The work of the Codes of Practice Committee; The acceptance by the Ministry of Works of the principle of prefabrication for both permanent and temporary building; The appointment of Dr. Stradling as Chief Scientific Adviser to the Ministry of Works.

Recent scientific advances in the statistical control of the quality of products are to be read in two publications of the British Standards Institution — B.S. 1008/42 and B.S. 600/R/42. The methods given in these publications have been worked out for mechanical engineering, which is normally a continuous process of production, rather than for building materials, which are mostly produced by the batch method. Nevertheless, a considerable amount of work has been done in the statistical control of quality of products produced in batches and successful experiments in testing the quality of, for example, consignments of steel and leather show that wherever quality can be measured in physical units some adaptation of the method can be applied with success.

The advantages of the new method lie in greater reliability of the product, that is, a smaller risk to the customer of accepting an unsatisfactory product, while at the same time cutting down the cost of inspection.

In the production of machine tool parts it was formerly customary to inspect every part produced—yet still defects appeared in consignments of parts. As soon as fatigue sets in the inspector is as subject to error as the machine worker. Recognition of this fact led to the inclusion of clauses in contracts that a consignment should not contain more than a certain percentage of defective material.

The application of the new process of continuous small samples results in a large saving of inspection labour; it demands one skilled statistical worker with a few intelligent though unskilled assistance in place of a large number of inspectors which were formerly required.

A further advantage to the manufacturer is that the process can be applied to each stage of manufacture, so that he can forecast the moment when his product is beginning to become defective, and apply the remedy before a costly batch of products becomes spoiled.

The advantage to the consumer lies in the fact that a ready technique is available to him for checking the reliability of the product. He is no longer dependent on the unsupported word of the salesman.

Statisticians are developing a further use of this system so that it will be possible to estimate the effect of a modification of the productive process on the quality of the product. Part of the variation in the crushing strength of bricks and cement rises from the different temperatures in different parts of the kilns. A new system of draught might result in a greater equalisation of temperatures in the different areas of the kilns, and yet the installation might be an expensive business. The manufacturer has to balance the extra cost against the greater quality of the product. The chief question in his mind is therefore "How much greater quality?" The work done in this field so far indicates a range of possibilities in the scientific control of production.

The new emergency factory-made house is a case in point. The need for speed in the production of these houses is evident, but it would be disastrous if the Ministry of Works were to ignore quality in the interests of speed. The new house is an alternative method of construction which will stand or fall on its merits as a cheap and reasonably durable form of construction. It would be interesting to learn the extent to which the Ministry proposes to apply the new methods to the control of its quality.

THE "PORTAL" HOUSE.

L.C.C. HOUSING CHAIRMAN'S CRITICISMS.

That the "Portal" Government steel prefabricated house would not pass the London Building Act by-laws was the opinion of Mr. C. W. Gibson, chairman of the L.C.C. Housing Committee speaking at a Building Trades' Federation Conference at the Holborn Hall, London, recently. He thought that the public argument about prefabricated houses must be allowed to result in lower standards of housing for the working class. Converted Nissen huts or steel shacks were not good enough, and the "Portal" house was a good example of the tendency to reduce standards of construction and appearance. It was ugly in design; every drop of rain would be heard on the roof; it would be hot in summer and very cold in winter; it had no back door; and would be very oppressive to live in.

Mr. Gibson concluded by expressing the belief that the building trade could produce permanent houses quickly, if given a long-term programme and the guarantees which they had asked for.

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REINFORCED CONCRETE STRUCTURES.

M.O.W. POST-WAR BUILDING STUDY.

The eighth of the Post-War Building Studies* is about reinforced concrete structures, and is the work of a Committee convened by the Institution of Structural Engineers "to review the practice of reinforced concrete construction in buildings, and to make recommendations which will ensure in the post-war period the greatest practical economies in material and the most rapid methods of construction."

Among the numerous recommendations are some valuable pointers. The suggestion, for example, that a "strength" specification for concrete should be substituted for the instructional specification which is now almost universal, is one which might usefully be followed up. Although there are serious difficulties in the way, there is little doubt that a strength specification would provide an incentive to a more intensive study of concrete and its manufacture, and in due course result in marked economy. The training of engineers—supervisors as well as those in charge of construction on the contractor's behalf—which the Committee advocates, should go a long way towards removing the difficulties.

The question of concrete surface finishes touched upon by the Committee is also an important one, and a solution of the problems involved is one of the most urgent facing practitioners in reinforced concrete. Rather more than the drawing up of recommendations would seem to be required; a great deal of research remains to be done, and work along these lines cannot but be fruitful of economy.

The Committee discussed at some length the standardisation of concrete sections, and came somewhat surprisingly to the conclusion that such standardisation is undesirable. While it will be generally agreed that any standardisation of design is to be deprecated, there would nevertheless seem to be considerable scope for economy in the standardisation of the overall sizes of members. As the formwork represents the major item of cost in a reinforced concrete structure it would seem to be the most likely field in which to seek economy, and a measure of standardisation in the sizes of members in common use might lead to important results, particularly in view of the increasing use of steel shuttering. The saving of 10 per cent. of concrete which is recommended is surely negligible in comparison with that which would follow if the contractor could keep, or hire, standard shutters and use them over and over again, instead of scrapping them at the end of each job.

The Committee appears to have devoted much time and care to a consideration of the Code of Practice, but the suggested amendments would have little effect on economy of material or rapidity of construction. Its comments, however, will no doubt be useful to the Code of Practice Committee which is now engaged upon its revision.

*H.M. Stationery Office. Price 6d.

The Influence of Trade Associations.

The current issue (No. 221) of "Planning" contains one of the very few accounts of trade associations as a whole to be published in this country. It shows how the number, membership and influence of trade associations has been growing. It describes shortly some of their main activities, ranging from publicity campaigns to price regulation. The broadsheet is published by PEP, from 16, Queen Anne's-gate, S.W.1.

WEEK IN PARLIAMENT.

The Barlow Report.

DURING the recent debate in the House of Commons on the location of industry, MR. DALTON, the President of the Board of Trade, said that the Government accepted the majority of the recommendations of the Barlow Report. That report proposed the imposition of a ban on building in certain areas. The Government had powers to enforce that ban now, and they reserved the right to use those powers, after proper consultation, by declining to give industrial building permits in certain areas. Those industrial building permits must continue for some time to come. It was idle to pretend that this particular form of Government regulation could be swept away when Germany and Japan were defeated. For some time after the war building labour and materials would be in very short supply in relation to the immense demand there would be for new buildings of all kinds, and, therefore, it was essential that they should have a national plan and be able to determine priorities in regard to the use of building labour and materials in the national interest.

All over the country there would be an urgent need for new houses. But in many parts of the country there would be no such urgent need for new industrial development, and the question to be asked was where, in what parts of the country, could we justify the use of some of our scarce building labour and material for new industrial buildings. The answer to that was pretty clear. Generally speaking, we should, after the war, build factories only in regions where there were not enough factories to furnish employment for the population. In these regions they would build factories as well as houses, but, elsewhere, where there was sufficient factory accommodation to furnish employment for the population, there, surely, we should concentrate on the building of houses and not factories. In those areas where there was sufficient factory accommodation to employ the population, the problem would be to secure, as munition work fell off, that in those factories now built and already existing, there should be other work available. The problem there was not to build new factories but to see that the existing factories were kept working at full capacity.

The Barlow Report recommended the prohibition of new factory development in London. The Government did not accept that as it stood. They would consider each case on its merits, but London was not one of the areas where there was urgent need of factory development.

Rural Housing.

MR. ROSTRON DUCKWORTH asked the Minister of Health if he would give the names of the 14 separate Government Departments, bodies and persons who had to be considered before the sites were purchased for the building of war-time agricultural cottages.

MR. WILLINK said that owing to war-time conditions the authorities interested in the purchase of land for this scheme were the Ministry of Health, the District Valuer of the Board of Inland Revenue, the Ministry of Town and Country Planning, the Ministry of Works, the three Service Departments, three Production Departments, the Ministry of Home Security, the Ministry of War Transport, the County Council, and the County War Agricultural Executive Committee. In order to assist local authorities arrangements were, however, made for most of this consultation to be done by his Regional Officers. A simplified procedure had now been devised on the lines recommended by the Rural Housing Sub-Committee of the M.o.H. Central Housing Advisory Committee.

SIR WILLIAM EDGE asked the Minister of Health if he could now state by counties the inclusive cost of the 3,000 houses allocated to rural workers; and the rents in each county at which these houses had been let.

MR. WILLINK said the final costs were at present available for 64 parlour houses and 4 non-parlour houses. The *inclusive* costs and rents of these houses were shown in the following statement.

County.	No. of houses for which final costs available.	Type of houses.	Inclusive cost per house.	Rent per week.
Dorset	4	Parlour	£1,177	10s. 4d.
Durham	12	,,	£972 to £1,101	6s. 9d. to 10s.
Hants	6	,,	£1,080	14s. 2d.
Herts	4	,,	£1,104	10s.
Kent	4	,,	£1,009	8s. 2d.
Norfolk	10	,,	£982	9s. 8d.
Somerset	4	Non-Parlour	£821	7s. 9d.
Sussex, East	8	Parlour	£1,034 to £1,041	10s. 8d. to 12s. 6d.
Sussex, West	4	,,	£1,034 to £1,075	10s. 3d. to 10s. 7d.
Yorks, West Riding	12	,,	£898 to £928	8s. 6d. to 10s.

MR. GRANVILLE asked the Minister of Health what progress had now been made with the promised 3,000 rural houses; and if he could give the number completed for occupation.

MR. WILLINK said that approximately 80 per cent. of the building work involved in the construction of the 2,838 houses for which tenders had been approved had been done. 1,534 of those houses were completed and another 967 were roofed-in or at a later stage.

MR. J. GRIFFITHS asked the Minister of Health if he was aware of the concern felt among local authorities in the rural areas of Wales at the prohibitive costs of constructing agricultural houses and complaints of prices being forced up by builders' rings; how many houses had been built in Wales under this scheme; the average cost per house; and what steps he was taking to deal with the complaints made to his Department.

MR. WILLINK said he was aware of the concern felt about the high cost of house building at present, but no complaints of the nature indicated in the question had been received by him. The last part of the question would not therefore arise. Sixty-six houses had been completed in Wales under the scheme. The final costs of these houses were not yet available, but the average estimated all-in cost was £925 for non-parlour houses, and £1,010 for parlour houses.

Electricity in New Houses.

SIR WALDRON SMITHERS asked the Minister of Fuel and Power why electricity for all domestic purposes, and especially for the new houses was not being made available to all at reasonable cost.

MAJOR LLOYD GEORGE said that electricity charges in new houses could not be considered apart from charges to domestic consumers generally. Revision of such domestic tariffs raised very important questions affecting the finances and organisation of the whole of the electricity supply industry and could only be undertaken as part of a reorganisation of the industry in the post-war period. The question how far such reorganisation was necessary was at present before the Government.

Factory Built Houses and Bye-laws.

MR. BOSSOM asked the Minister of Health in the respects where the Government's proposed factory-built bungalow did not conform with his Department's model bye-laws or the seven building Acts governing our large cities, what action he was taking to enable these and similar houses built by other than Government agencies to come within the law.

MISS HORSBRUGH said that this was one of the many matters which was under consideration in connection with emergency factory made houses.

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DAMAGE TO WAR FACTORIES

The attention of all member firms engaged in war production for the Admiralty, Ministry of Supply or Ministry of Aircraft Production, is drawn to the necessity of the immediate reporting of damage arising from enemy action, civil fire, explosion or accident, to the Local Reconstruction Panel of the Emergency Services Organisation.

Panels, which exist in every individual area in Great Britain and Northern Ireland, are able to render great assistance in facilitating the restoration of production. They are also the official channels for immediate report of damage to the appropriate Production Departments, to whom the earliest possible notification is imperative.

If members are not acquainted with the address of their appropriate panel, such information will be sent upon application to the Emergency Services Organisation, Ministry of Aircraft Production, Millbank, London, S.W.1.

Housing and the House of Commons.

Speaking at a recent luncheon of the London Master Builders' Association (No. 5 Area) at Putney, Mr. Hugh Linstead, M.P., said that the dominant question before the House of Commons to-day was the provision of houses for the people. How they were produced was, and must be, a subsidiary matter, but produced they must be. The building industry, organised as it was through the London Master Builders' Association and the National Federation, could make its views known in high quarters, and if it spoke with one voice that voice would be listened to.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 8th APRIL, 1944

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

	Crafts-men.	Lab-ourers.
Aberavon	2/0	1/7
Aberdare	2/0	1/7
Abergavenny	2/0	1/7
Abingdon	1/10½	1/5½
Accrington	2/0	1/7
Aldeburgh	1/8½	1/4½
Aldermaston	1/10½	1/5½
Aldershot	2/0	1/7
Alfreton U.D.	1/11½	1/6½
Alnwick	2/0	1/7
Altrincham	1/11½	1/6½
Amble	1/10½	1/5½
Amersham	2/0	1/7
Ammanford	1/10	1/5½
Andover	1/10	1/5½
Ardingly	1/10	1/5½
Arundel	1/10	1/5½
Ascot		
Ashby-de-la-Zouch U.D.	2/0	1/7
Ashford (Kent)	1/10	1/5½
Ashford (Middlesex)	2/0	1/7
Ashington	1/11½	1/6½
Ashtead	2/0	1/7
Ashton-under-Lyne	2/0	1/7
Aylesbury	1/10	1/5½
Aylsham	1/9	1/4½
Bagshot	1/10	1/5½
Banbury	1/10	1/5½
Barnsley	2/0	1/7
Barnstaple	1/10	1/5½
Barrow-in-Furness	2/0	1/7
Barry	2/0	1/7
Basingstoke	1/10	1/5½
Bath	1/11½	1/6½
Batley	2/0	1/7
Beaconsfield	1/10½	1/5½
Beccles	1/8½	1/4½
Bedford	1/11½	1/6½
Berkhamsted	1/10	1/5½
Berwick	1/11½	1/6½
Beverley	2/0	1/7
Bexhill	1/10½	1/5½
Bideford	1/10	1/5½
Biggleswade	1/10	1/5½
Billericay	1/9½	1/5
Birchington	1/10	1/5½
Birkenhead	‡2/1	¶
Birmingham C.B.	†2/0	†1/7
Bishop Auckland	2/0	1/7
Bishop's Stortford	1/11	1/6½
Blackburn	2/0	1/7
Blackpool	2/0	1/7
Blyth	2/0	1/7
Bognor Regis	1/10	1/5½
Bolton	2/0	1/7
Bournemouth	1/11	1/6½
Bracknell	1/10	1/5½
Bradford	2/0	1/7
Bradford-on-Avon	1/9	1/4½
Braintree	1/10	1/5½
Brentwood	1/11½	1/6½
Bridgwater	1/10½	1/5½
Bridlington	1/11½	1/6½
Brighouse	2/0	1/7
Brighton	1/11	1/6½
Bristol	2/0	1/7
Broadstairs	1/10	1/5½
Bromsgrove U.D.	1/11½	1/6½
Buckley	2/0	1/7
Bungay	1/8	1/4
Burnham-on-Crouch	1/8½	1/4½
Burnley	2/0	1/7
Burslem	2/0	1/7
Burton-on-Trent C.B.	2/0	1/7
Bury	2/0	1/7
Bury St. Edmunds	1/9½	1/5
Buxton	1/11½	1/6½
Byfleet	1/10½	1/5½
Cambridge	2/0	1/7
Canterbury	1/10	1/5½
Cardiff	2/0	1/7
Carlisle	2/0	1/7
Carnforth	2/0	1/7
Castleford	2/0	1/7
Caterham	2/0	1/7
Chard	1/9	1/4½
Chatham	1/11	1/6½
Chelmsford	1/11½	1/6½
Cheltenham	1/11	1/6½
Chepstow	1/11½	1/6½
Chertsey	1/11	1/6½
Chester	2/0	1/7
Chesterfield M.B.	2/0	1/7
Chichester	1/10	1/5½
Chorley	2/0	1/7
Cirencester	1/9½	1/5
Clacton	1/10	1/5½
Cleveleys	2/0	1/7
Clitheroe	2/0	1/7
Cobham (Surrey)	1/11	1/6½
Colchester	1/11½	1/6½
Colwyn Bay	1/11	1/6½
Congleton	1/11½	1/6½
Coventry C.B.	2/0	1/7
Cranbrook	1/10	1/5½
Cranleigh	1/10	1/5½
Crawley	1/10	1/5½
Crewe	1/11½	1/6½
Cromer	1/9	1/4½
Crowborough	1/10	1/5½
Cuckfield	1/10	1/5½
Darlington	2/0	1/7
Darwen	2/0	1/7
Daventry M.B.	1/10½	1/5½
Deal	1/10	1/5½
Denbigh Town	1/11	1/6½
Derby C.B.	2/0	1/7
Devizes	1/9	1/4½
Dewsbury	2/0	1/7
Didcot	1/10	1/5½
Diss	1/8½	1/4½
Doncaster	2/0	1/7
Dorchester	1/9½	1/5
Dorking	1/10½	1/5½
Dover	1/10	1/5½
Dovercourt	1/10	1/5½
Driffield	1/10½	1/5½
Droitwich M.B.	1/11½	1/6½
Dudley M.B.	2/0	1/7
Dunstable	1/10½	1/5½
Durham City	2/0	1/7
Eastbourne	1/11	1/6½
E. Glam. (Mon. Val.)	2/0	1/7
East Grinstead	1/10	1/5½
Edenbridge	1/10	1/5½
Ely	1/9	1/4½
Epping	2/0	1/7
Exeter	1/11½	1/6½
Exmouth	1/10½	1/5½
Fakenham	1/9	1/4½
Falmouth	1/10½	1/5½
Fareham	1/11	1/6½
Faversham	1/10	1/5½
Felixstowe	1/11	1/6½
Filey	1/10½	1/5½
Fleetwood	2/0	1/7
Flint	2/0	1/7
Folkestone	1/10	1/5½
Frinton-on-Sea	1/10	1/5½
Frome	1/9	1/4½
Gainsborough U.D.	1/11	1/6½
Gateshead	2/0	1/7
Gillingham (Kent)	1/11	1/6½
Glossop	2/0	1/7
Gloucester	1/11½	1/6½
Godalming	1/10	1/5½
Goole	2/0	1/7
Gosport	1/11½	1/6½
Grantham M.B.	1/11	1/6½
Gravesend	1/11½	1/6½
Great Yarmouth	1/10	1/5½
Grimsby	2/0	1/7
Guildford	1/10	1/5½
Guilsborough	1/10½	1/5½
Halifax	2/0	1/7
Hanley	2/0	1/7
Harpenden	1/11	1/6½
Harrogate	2/0	1/7
Hartlepools	2/0	1/7
Harwich	1/10	1/5½
Haslemere	1/10	1/5½
Hastings	1/10	1/5½
Hatfield	1/11½	1/6½
Haywards Heath	1/10	1/5½
Hednesford	1/11½	1/6½
Hemel Hempstead	1/11	1/6½
Henley-on-Thames	1/10	1/5½
Hereford	1/10	1/5½
Herne Bay	1/10	1/5½
Hertford	1/11½	1/6½
Heysham	2/0	1/7
Hitchin	1/11	1/6½
Hoddesdon	1/11½	1/6½
Holt (Norfolk)	1/8½	1/4½
Horley	1/10	1/5½
Horsham	1/10	1/5½
Horwich	2/0	1/7
Huddersfield	2/0	1/7
Hull	2/0	1/7
Hunstanton	1/9	1/4½
Huntingdon	1/9½	1/5
Ilfracombe	1/10	1/5½
Ingatestone	1/10½	1/5½
Ipswich	1/11½	1/6½
Isle of Thanet	1/10	1/5½
Isle of Wight	1/9½	1/5
Keighley	2/0	1/7
Kenilworth	2/0	1/7
Kettering M.B.	2/0	1/7
Kidderminster M.B.	1/11½	1/6½
King's Lynn	1/10	1/5½
Kirkham	2/0	1/7
Knowle	1/11½	1/6½
Lancaster	2/0	1/7
Leamington M.B.	2/0	1/7
Leatherhead	1/11	1/6½
Leeds	2/0	1/7
Leicester C.B.	2/0	1/7
Leighton Buzzard	1/9	1/4½
Letchworth	1/11	1/6½
Lewes	1/10	1/5½
Lichfield M.B.	1/11	1/6½
Lincoln C.B.	2/0	1/7
Littlehampton	1/10	1/5½
Liverpool	‡2/1	¶
Llandudno	1/11	1/6½
Llanelly	2/0	1/7
London—		
12m. radius	2/1½	1/8
12-15m. radius	2/1	1/7½
Long Eaton U.D.	2/0	1/7
Longton	2/0	1/7
Loughborough M.B.	2/0	1/7
Louth M.B.	1/10½	1/5½
Lowestoft	1/10	1/5½
Luton	1/11½	1/6½
Macclesfield	1/11½	1/6½
Maidenhead	1/11	1/6½
Maidstone	1/10½	1/5½
Malvern U.D.	1/10½	1/5½
Manchester	2/0	1/7
Manningtree	1/9	1/4½
Mansfield M.B.	2/0	1/7
March	1/9	1/4½
Margate	1/10	1/5½
Market Harborough	1/11	1/6½
Matlock U.D.	1/10½	1/5½
Melton Constable	1/8½	1/4½
Melton Mowbray	1/11	1/6½
Merthyr	2/0	1/7
Middlesbrough	2/0	1/7
Middleton	2/0	1/7
Middlewich	1/11½	1/6½
Milford Haven	1/10½	1/5½
Morecambe	2/0	1/7
Morley	2/0	1/7
Mundesley	1/9	1/4½
Nantwich	1/11½	1/6½
Nelson	2/0	1/7
Newark-on-Trent	1/11½	1/6½
Newbury	1/10	1/5½
Newcastle-on-Tyne	2/0	1/7
Newcastle-u.-Lyme	2/0	1/7
New Forest	1/10	1/5½
Newmarket	1/10	1/5½
Newport, Mon.	2/0	1/7
Newport Pagnell	1/10	1/5½
Northampton C.B.	2/0	1/7
Norwich	2/0	1/7
Nottingham	2/0	1/7
Nuneaton	2/0	1/7
Oakham U.D.	1/10½	1/5½
Oldham	2/0	1/7
Ormskirk	2/0	1/7
Oxford	1/11½	1/6½
Oxted	1/10½	1/5½
Paignton	1/11½	1/6½
Peterborough (Borough)	1/11½	1/6½
Plymouth	2/0	1/7
Pontefract	2/0	1/7
Pontypridd	2/0	1/7
Port Talbot	2/0	1/7
Portsmouth	1/11½	1/6½
Preston	2/0	1/7
Pulborough	1/10	1/5½
Ramsgate	1/10	1/5½
Reading	1/11½	1/6½
Redditch U.D.	1/11½	1/6½
Redhill	1/10½	1/5½
Ripon	1/10½	1/5½
Rochdale	2/0	1/7
Rochester	1/11	1/6½
Rugby M.B.	2/0	1/7
St. Albans	1/11½	1/6½
St. Helens	2/0	1/7
St. Neots	1/9½	1/5
Saffron Walden	1/9	1/4½
Salisbury City	1/9½	1/5
Salisbury Plain	1/11	1/6½
Sawbridgeworth	1/10½	1/5½
Saxmundham	1/8½	1/4½
Scarborough	1/11½	1/6½
Scunthorpe	2/0	1/7
Selby	2/0	1/7
Sevenoaks	1/10½	1/5½
Sheerness	1/10	1/5½
Sheffield	2/0	1/7
Shipley	2/0	1/7
Shoeburyness	1/11½	1/6½
Shoreham	1/11	1/6½
Shrewsbury M.B.	1/11½	1/6½
Sittingbourne	1/10	1/5½
Skegness U.D.	1/11	1/6½
Sleaford U.D.	1/10½	1/5½
Slough	1/11	1/6½
Smethwick	†2/0	†1/7
Southampton	1/11½	1/6½
Southend-on-Sea	1/11½	1/6½
Southport	2/0	1/7
South Shields	2/0	1/7
Spalding	1/10	1/5½
Stafford M.B.	1/11½	1/6½
Staines	1/11	1/6½
Stamford M.B.	1/11	1/6½
Stevenage	1/11	1/6½
Stockport	2/0	1/7
Stockton-on-Tees	2/0	1/7
Stoke-on-Trent C.B.	2/0	1/7
Stourbridge M.B.	2/0	1/7
Stourport U.D.	1/11½	1/6½
Stowmarket	1/9	1/4½
Stratford-on-Avon M.B.	1/11	1/6½
Stroud	1/11	1/6½
Sunderland	2/0	1/7
Sutton Coldfield M.B.	2/0	1/7
Swaffham	1/8½	1/4½
Swanage	1/10	1/5½
Swansea	2/0	1/7
Swindon	1/10½	1/5½
Tamworth M.B.	1/11½	1/6½
Taunton	1/10½	1/5½
Tenterden	1/10	1/5½
Thames Haven	2/0	1/7
Thetford	1/9½	1/5
Thorpe Bay	1/11½	1/6½
Todmorden	2/0	1/7
Tonbridge	1/10½	1/5½
Torquay	1/11½	1/6½
Totnes	1/10	1/5½
Trowbridge	1/9	1/4½
Truro	1/9½	1/5
Tunbridge Wells	1/10½	1/5½
Uppingham (Salop)	1/11½	1/6½
Uttoxeter U.D.	1/10½	1/5½
Wakefield	2/0	1/7
Walsall C.B.	2/0	1/7
Walsden	2/0	1/7
Walton-on-Naze	1/10	1/5½
Ware	1/11½	1/6½
Warminster	1/9	1/4½
Warrington	2/0	1/7
Warwick M.B.	2/0	1/7
Wellington R.D.	1/11½	1/6½
Welwyn	1/11	1/6½
Welwyn Gar. City	2/0	1/7
Wells (Norfolk)	1/8½	1/4½
West Bromwich C.B.	2/0	1/7
Westcliff-on-Sea	1/11½	1/6½
Weston-super-Mare	1/11	1/6½
Weybridge	1/11	1/6½
Weymouth	1/10	1/5½
Whitby	1/11	1/6½
Whitstable	1/10	1/5½
Widnes	2/0	1/7
Wigan	2/0	1/7
Wigton	1/10½	1/5½
Willington	2/0	1/7
Wilmslow	2/0	1/7
Winchester	1/10½	1/5½
Windermere	1/10½	1/5½
Windsor	1/11	1/6½
Wisbech	1/9½	1/5
Witham	1/10	1/5½
Woking	1/10½	1/5½
Wokingham	1/10	1/5½
Wolverhampton C.B.	2/0	1/7
Woodbridge	1/9½	1/5
Worcester C.B.	1/11½	1/6½
Workington	1/10½	1/5½
Worksop	1/11½	1/6½
Worthing	1/10	1/5½
Wrexham	1/11½	1/6½
Wroxham	1/9½	1/5
Wycombe	1/11	1/6½
Wymondham	1/9	1/4½
Yeovil	1/10½	1/5½
York	2/0	1/7

† Plus 2d. per working day. ‡ Plasterers 2/1½. ¶ Tradesmen's Labourers, 1/7½. Navvies and General Labourers, 1/6½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

NOTE.—Carpenters, Joiners and Plumbers in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the basic rate of wages for women engaged on craft processes is 1/6½ per hour after the conclusion of a probationary period of three months. During the probationary period the rate of wages is first month 1/0½ per hour, second month 1/2½ per hour, and third month 1/4½ per hour. For all women carrying out work other than on craft processes, 1/3 per hour.

For Building Trade Wages in Scotland, see page 491

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
First Hard Stocks	4 16 0
Second Hard Stocks	4 9 0
Mild Stocks	3 16 0
Single Rough Stocks	3 10 0
Common Stocks	3 0 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

	London Rated Stations 2½ in. Phorpres.	Site in London Area, North of Thames
A discount of 6d. 1,000 only monthly account.	per 1,000 s. d.	per 1,000 s. d.
Pressed	58 3	68 3
Keyed	60 3	70 3
Single Bullnose	78 3	88 3
Rustics	78 3	88 3
Whites	78 9	88 3

	£ s. d.
Best blue Pressed Staffs. (London Stns.)	11 12 0
Do. Bullnose (London Stns.)	12 2 0
Blue Wire Cuts (London Stns.)	10 9 6

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. 10 0 0	3 in. 12 0 0

GLAZED BRICKS (London Stns.). Add 12½% to Prices.

Best White Ivory and Salt Glazed	D'ble Str'tch'rs 38 10 0
	D'ble Headers 35 10 0
Stretcher 30 0 0	One side&two ends 39 10 0
Headers 29 10 0	Two sides&one end 40 10 0
Quoins, Bullnose and 4½in. Flats 36 10 0	Splays and Squints 38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £3 10s. extra over white.

ADD LEVY ON BRICKS, 3/- per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered London Area.
12 miles radius Charing Cross.
HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	2 8
2½" " " 110 "	2 11
3" " " 100 "	3 6
4" " " 84 "	4 0

Half blocks *add* 2s. per yard super to above prices.

CLINKER CONCRETE.

2" per yd. sup. 1 11	3" per yd. sup. 2 6
2½" " " 2 3	4" " " 3 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 8
Size 12 x 9 x 2½" " "	2 11
Size 12 x 9 x 3" " "	3 6
Size 12 x 9 x 4" " "	4 0

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2" 2 8	12" x 9" x 3" 3 6
12" x 9" x 2½" 2 11	12" x 9" x 4" 4 0

Per yard super d/d. Free on site, London.
Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. .... per ft. cube	4 7
Do. do. delivered on road waggons as above stations ..... per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto ..... "	1 4½
HARD YORK—	
Delivered at any Goods Station, London.	
Scrappled random blocks .. per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
3 in. ditto ditto ..... "	2 8
2 in. self-faced random flags.. per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per cube : Plain, 7s. 6d. Moulded, 8s. 6d.
Small section cills and copings, 11s.

SAND.

Thames Ballast	11s. 6d. per yd.	delivered 2 miles radius Padding-ton.
Pit Ballast	10s. 0d. " "	
Pit Sand	12s. 0d. " "	
Washed Sand	13s. 0d. " "	
¼ in. Shingle	10s. 6d. " "	
¼ in. Broken Brick	16s. 0d. " "	
Pan Breeze	10s. 0d. " "	

CEMENT.

	£ s. d.
Best British Portland Cement. Standard Specification, delivered London area.	
6 ton loads and upwards site .... per ton	2 11 0
1 to 6 tons site	2 14 0
Alongside Vauxhall in 80-ton lots	2 8 6
"Ferrocrete" Rapid Hardening Cement—	
6 ton loads and upwards site	2 17 0
1 to 6 tons site	3 0 0
Alongside Vauxhall in 80-ton lots	2 14 6
"Aquacrete" Water Repellent, "Blue Circle" cement, 30s. per ton on ordinary "Blue Circle" prices.	
"Colorcrete" Nos. 1 and 2. Coloured rapid Hardening Portland Cement in 6 ton lots	4 11 0
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
"Snowcrete" White Portland Cement (in free paper bags)	11 5 0
Under one ton .. .. .. per cwt.	0 13 2
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 tons lots and upwards	3 11 0
Plus packages at current prices.	
Super Cement (Waterproof), bags extra.	4 1 0

NOTE.—Jute sacks charged at 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.
Less than one ton 1s. 9½d. nett each.
Credit 1s. 6d. nett each when returned in good condition within two weeks.

£ s. d.	£ s. d.
Roman Cement 8 10 0	Keene'sCement, White 7 0 0
Parian Cement 7 0 0	" " Pink 6 10 0

Cementone Colours for cement according to tints, per cwt. from £3 5s. 0d.

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual £ s. d.	£ s. d.
24 by 12 .... 45 5 0	18 by 10 .... 24 0 6
22 by 12 .... 37 17 6	18 by 9 .... 22 12 0
22 by 11 .... 34 2 6	16 by 10 .... 21 10 6
20 by 12 .... 33 0 0	16 by 8 .... 16 12 6
20 by 10 .... 30 5 0	

Having Secured the Contract— what about the Steel Scaffolding?

For the lowest Prices apply to the Oldest Firm in the Scaffolding Trade.

STEPHENS & CARTER LTD.
The British Steel Scaffolding Co.
731-761, HARROW RD., N.W.10
Telephone No. Ladbroke 1191 (6 lines)

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink....	4 2 6	Sirapite, Coarse	4 11 6
" White ..	4 10 0	" Finish	4 19 6
Pioneer	5 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue		Grey Stone Lime	3 1 0
Lias Lime ..	3 7 6	Chalk Lime	3 1 0
Granite Chippings	2 0 0	Hair per cwt. ..	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £2 12s. 6d. 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£6 12 9
Ditto hand-made ditto	7 19 9
Ornamental ditto	8 7 0
Hip and valley tiles—Hand-made (per dozen)	16 4
—Machine-made	15 7

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	Foot cube. s. d.		£ s. d.
Dry English Wainscot Billets	16 0	to	0 18 0
Dry Slavonian Billet Wainscot ..	17 0	to	1 0 0
Dry Cuba Mahogany logs	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak			0 12 6
Jap, Figured Oak			0 13 0
Jap, Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue		per cwt.	5 0 0
Liquid glue		per gallon	1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes		
2 in. by 3 in. to 4 in. by 11 in.	47 0 0	58 0 0

PLANED BOARDS.
PRIME CLEAR BRITISH COLUMBIAN PINE.

Per standard.	£ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	71 0 0
Per square.	s. d.
1 in. plain edge flooring	56 3
1¼ in. ditto	70 6
1 in. tongued and grooved	56 3
1¼ in. ditto	70 6

MATCHING.* per square.

	s. d.
¾ in.	40 0
¾ in.	45 3
1 in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.
M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON

½ in.	¾ in.
33/-	51/- per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
60/-	72/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
33/-	48/-	86/-	209/-	281/-	456/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
45/-	77/6	123/-	240/-	372/-	624/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
5/6	6/8	11/-	24/-	36/-	56/- per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
72/-	115/-	144/-	288/-	384/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
14/-	18/6	25/9	45/3	64/9	71/6 per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/9	13/6	25/-	37/-	46/- per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.
1½ × 6 lbs. 1½ × 6 lbs. 2 × 7 lbs. 3 × 7 lbs.

Lead P.	26/-	34/-	55/-	92/- per doz.
Lead S.	34/-	41/-	67/-	115/- per doz.

SOLDER.—Plumbers', 1/7. Tinmen's, 2/1. Blow pipe 2/6 per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &c., to LONDON STATION PER TON—

	£ s. d.
R.S. Joists, cut and fitted	£24 0 0
Plain Compound Girders	26 10 0
Stanchions	29 0 0
In Roof Work	35 0 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	23 5 0	½ in.	21 15 0
⅜ in.	22 15 0	½ in. to 2¾ in.	21 5 0
¼ in.	22 5 0		

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

10/17

	Tubes. ⅛"/6" ⅜	Tubulars. ½"/6" ⅜	and 19/24" ½	Flanges. ½"/2" ⅜	2½"/6" ½
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ⅛"/¼" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/5½	1/2½	4½d.
3½ in.	1/7	1/4	4½d.
4 in.	1/7	1/6	6½d.
4½ in.	1/8½	1/8½	7½d.
5 in.	2/0½	2/0	9d.

O.G. GUTTERS.

3 in.	1/10½	1/7½	5d.
3½ in.	2/1½	1/7½	6½d.
4 in.	2/1½	1/8½	7½d.
4½ in.	2/2½	1/11½	8½d.
5 in.	2/8½	2/3	10½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/2½	1/5½	2/2
2½ in.	2/3½	1/8½	2/7½
3 in.	2/8½	2/1½	3/2
3½ in.	3/2½	2/6½	3/7½
4 in.	3/8½	3/0½	4/5

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE.

cwt. qr. lbs. in 9 fts.	per yard.	Bends.	Branches.
3 in. 0 3 14	6/0	7/3	11/6
4 in. 1 1 17	8/7	8/2	14/5
5 in. 1 2 18	10/7	14/9	22/3
6 in. 2 0 1	12/9	17/0	29/8

Gaskin, 75/- per cwt.

	Per ton basis in London. £ s. d.
IRON.—Staffordshire Crown, Merchant quality	18 7 6
IRON.—Staffordshire Marked Bars	19 7 6
Mild Steel Bars	19 15 0
Mild Steel Hoops	21 10 0

Ex Merchant's Stock, per ton (two-ton lots).

Soft Steel Sheets, C.R. and C.A.—	
20 gauge	24 17 6
24 gauge	25 2 6
26 gauge	25 17 6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	27 0 0
24 gauge	27 10 0
26 gauge	28 15 0
Galvanised Flat Sheets, C.R. and C.A.—	
20 gauge	28 10 0
24 gauge	29 0 0
26 gauge	30 5 0

	Per ton £ s. d.
Cut Nails, 3 in. and up	28 10 0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil (5 galls.) per gallon	0 7 0
Boiled Linseed Oil (5 galls.) "	0 7 4
Genuine Ground English White Lead, per cwt.	3 11 9
Genuine White Lead Paint, 14-lb. tins free, per cwt.	4 16 6
Genuine Red Lead "	2 18 6
Linseed Oil Putty (Kegs extra) "	1 5 3
Utility Putty (Packages returnable) "	1 3 9
Size, XD quality ftkn.	0 4 9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	2/0½	2/0	1/11½	1/11	1/10½	1/10
Labourers	1/7	1/6½	1/6½	1/6	1/5½	1/5½

Aberdeen	A	Dumfriesshire	A2	Inverness	*	Perthshire	A2
Ayrshire	A	Dundee	A	Inverurie	A1	Peterhead	A1
Banff	B	Dunoon	A	Kincardineshire	A2	Renfrewshire	A
Berwickshire	A2	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A2
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A2
Doune	A	Forfarshire	A2	Moray and Nairn	B	Stewartry	A2
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A2	Stornoway	A2
Dumfries	A1	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

*This town has its own rates: Masons, 1/9½; Carpenters, 1/9½; Slaters, 1/9½; Plumbers, 1/10; Plasterers, 1/10½ but 1/11 is paid owing to the scarcity at present; Painters, 1/9½ and Labourers, 1/5.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 489.

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 16 0
Fine do.	"	0 18 0
Fine Copal	"	1 0 0
Pale Copal	"	1 2 0
Pale Opal Carriage	"	1 6 0
Best do. do.	"	1 14 0
Floor Varnish	Inside	1 0 0
Fine Pale Paper	"	1 0 0
Fine Copal Cabinet	"	1 4 0
Fine Copal Flatting	"	1 2 0
Hard Drying Oak	"	1 0 0
Fine Hard Drying Oak	"	1 1 6
Fine Copal Varnish	"	1 2 6
Pale do.	"	1 14 0
Best do.	"	1 4 0
Best Japan Gold Size	"	1 14 6
Best Black Japan	"	0 12 0
Oak and Mahogany Stain (water)		0 14 0
Brunswick Black		0 9 6
Berlin Black		0 16 0
Knotting (patent)		0 17 0
French and Brush Polish		0 14 0
Liquid Dryers in Terebene		0 11 0

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	38 0 0
Pipe in coils	38 10 0
Soil pipe	42 10 0
Compo pipe	47 10 0

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THE SCOTTISH BUILDER

NEW BUILDINGS

BLANTYRE.—Miners' Welfare Commission, 46, Carlton-pl., Glasgow, to carry out extensions at the Institute and new storage buildings.

CALDERBANK.—Plans prepared for alterations and extensions at garage, for which the architects are Motherwell, McMurdo and McGregor, 10, Bank-st., Airdrie.

COVINGTON.—Plans in hand for housing scheme, for which the architect is William Watt, Albert-st., Motherwell.

DRUMSYRE.—Plans prepared for reconstruction, alterations and additions to houses at Westhall, for which the architects are Cowie & Miller, 45, Cleland-rd., Wishaw.

ELGIN.—Department of Health approved plans for housing site at Pansport.

GLASGOW.—Plans prepared for alterations and additions for the Soho Trust, Ltd., Birmingham, for which the architect is M. L. Hendry, 18, Edmiston-dr., Glasgow.

LESMAHAGOW.—Plans prepared for farm buildings at North Cumberhead farm, for which the architect is W. Dodds Bertram, Turfholm, Lesmahagow.

STORNOWAY.—T.C. proceeding with erection of 38 houses at Macaulay-rd. Plans by Thomas O. W. Gratton, 216, West Regent-st., Glasgow.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
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24 oz. Clear or "R" quality	5
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32 oz.	8½

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Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	6½d.
Rough cast double rolled, ⅛ in.	7½d.
Rough cast double rolled, ¼ in.	7½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
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	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wire Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
" " 32 oz.	4 0
" Cast, ¼ in. thick	0 9½
" " ⅜ in. thick	1 0
" " ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
" " " ⅜ in. thick	1 0
" " " ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about ⅛ in. thick— To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	2 0
Cathedral "Vita" Glass: ¼ in. thickness	2 0
⅜ in. "	3 0
⅛ in. Georgian Wired "Vita" Glass	3 6

GLASS BRICKS.

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P.B. 1—8 in. × 4½ in. × 3½ in.	2 9	each nett
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P.B. 3—7½ in. × 7½ in. × 3½ in.	3 6	"
P.B. 32—7½ in. × 7½ in. × 3½ in.	3 6	"

Radiused Corner Bricks to match up with—

P.B. 2	4 6	each nett
P.B. 3	6 0	"
P.B. 32	6 0	"

SOME PROBLEMS OF THE INDUSTRY.

L.M.B.A. SOUTH-WESTERN AREA MEETING.

MANY matters of current building interest were touched upon at the second annual general meeting and luncheon of the South-Western Area of London Master Builders' Association held at Wimbledon Hall Hotel on Tuesday, May 23. MR. A. J. CHAPMAN, J.P., Immediate Past Chairman of the Southern Area, proposing the toast of "Our Guests," said that as an industry they should tackle the housing problem now, and see if by organisation and up-to-date methods and machinery, houses could not be produced at a rate which would satisfy the community. If this was done, there would not be the necessity to cover vast tracts of the country with temporary buildings. They were told that building costs were too high. They would continue to be so long as the industry was fettered by statutory rules and orders, and amendment of these orders. If they could get rid of controls, the Essential Works Order, and get back to reasonable conditions of work, they would find building costs would drop and drop rapidly.

MR. T. WEBSTER, A.M.I.C.E., Borough Engineer of Wimbledon, responding, said he had discovered during the last few months that the instructions and guidance issued from the different Government Departments did not always coincide, and that those issued to the builders were not always in conformity with the information received by the municipal engineer. The result conduced to initial misunderstandings, which were not easy to remove.

As to housing, it was not a pleasant thing to contemplate a large number of empty houses which needed repair, and a large number of families begging and praying to go into them. It seemed absurd that there should be houses 75 per cent. fit for occupation and that the completion of repairs should be delayed because people were thinking of new ones. The repair of existing houses should be given priority of labour and materials which would be effective in producing these repairs in a very short time.

The reduction in the output of labour was also a matter of very serious concern. Before the war the output for ordinary straight walling would be something like 850 to 1,000 bricks a day. It was now something like 350. This was one of the vital things which had to be corrected before they could make the necessary progress.

War Damage Payments.

MR. W. J. LACEY, the vice-chairman, referred to the "ever-present difficulty of bomb damage repairs" owing to the interpretations which the surveyor or the auditor of the council or the Government auditors place upon the Ministry of Home Security Prime Cost Contract. There was also a divergence of opinion amongst the assessors on the War Damage Commission. Some allowed a percentage to be added to the cost and another assessor would disallow it. There was an extraordinary anomaly between the fee allowed on bomb damage repair work carried out by the local authorities, who acted as agents for the War Damage Commission, and work carried out for private persons which would be settled by the Assessor of War Damage. A deputation went up to Mr. Harland to discuss the matter. The points which arose from the deputation were as follow: (1) That an endeavour should be made to get a revised form of prime cost contract for first-aid repair, with special reference to work under £100; (2) that where a member had a difficulty with a local authority, a representative from the Association should be empowered to negotiate the same, or, alternatively, the committee might appoint a member to interview the Council; (3) that a copy of the contract be issued by the Association giving members clearly the percentages they were entitled to under the various contract forms for different types of work. He was sure if they had something like that a lot of their troubles would disappear.

Apprenticeship in the Industry.

MAJOR L. SHINGLETON, O.B.E., chairman of the Apprenticeship Committee of the L.M.B.A., gave an address on "Apprenticeship and the Building Industry." One of the principal points of the scheme now adopted, he said, was that an apprentice could be transferred from one employer to another, and was really apprenticed to the industry rather than to an employer. Working conditions and wages for apprentices throughout the country were settled by the scheme and a National Joint Apprenticeship Board had been formed to regularise apprenticeships throughout the country. A joint representative committee had powers to deal with all matters of apprenticeship.

In the past there had been a great number of unindentured apprentices in London. For many reasons, it was absolutely vital all apprentices should be indentured, and the Government had decided that every apprentice must be registered. At the end of his time he would receive a certificate signed by his employer, the Chairman of the Joint Apprenticeship Committee, and the Registrar of the Ministry of Works, certifying that he had served his time. That would be his ticket enabling him to go into the trade as a first-class craftsman. Therefore, it behoved employers to have indentured apprentices in every case, and no unindentured apprentices or learners.

The National Joint Council had come to an agreement that as a war measure only juvenile labourers might come into the industry, and very unfortunately had agreed to pay them higher wages than apprentices. He begged them to do all they could to encourage the apprenticeship system and to give boys a chance to learn their craft, but not as juvenile labourers, where they would be at a dead end and never get any further. They were able to look forward as a result of the Apprenticeship Scheme to something like 20,000 apprentices, who would be wanted after the war. Unless they had proper apprentices and not juvenile labourers, they were not going to help the industry very much.

Boys were leaving school at 14 and 14 plus, but an apprentice could not start till he was 15. They had discussed the matter with the operatives and come to an arrangement that from 14½ they would receive the first year wages as an apprentice. When the school age was raised to 15 and 16, they would benefit because they would get a better class of boys who had had more technical training. Every apprentice had to have one or two afternoons a week at the Technical College. It was an obligation on the employer.

MR. L. SCOTT WHITE, Assistant Director of Emergency Works at the Ministry of Works, spoke on "Grouping for First-aid Repairs and How it Should Operate."

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FUTURE CONSTRUCTION

The Editor welcomes authentic information for this section from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

JUNE 20.

†**Croydon T.C.**—Erection of canteen kitchen building, forming an extension at Selhurst Grammar School for Boys. Ed. Officer, Katharine-st. Dep. £1. Tenders by July 6.

Heston and Isleworth T.C.—Repair and reconditioning of 49 and 90, Wesley-ave., Hounslow. B.E. and S. Dep. £1 1s.

JUNE 26.

Grimsby P.A.C.—Extensions to nurses' quarters at Scarthoe-rd. Infirmary. J. V. Oldfield, B.E. and S. Dep. £2.

JULY 3.

Kirkcaldy T.C.—Erection of 20 houses at Hayfield East housing site. Burgh E.

Redditch U.D.C.—Completion of 46 houses at Batchley estate. E. Buckley, P.A.S.I., E. and S., Council House. Dep. £5.

Walsall T.C.—Completion of 10 houses at Warner-rd., Coalpool. B.S. Dep. £3 3s.

JULY 10.

Isle of Wight E.C.—Adaptations at Osborne-rd. School, East Cowes. S. Gregson, County Architect, County Hall, Newport. Dep. £1 1s.

NO DATE.

Harwich T.C.—Erection of sub-station. B.S. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

JUNE 20.

†**Notts C.C.**—Painting work (1) Carlton School Clinic (exterior); (2) Hopewell Hall Special School (interior). County Architect, Shire Hall, Nottingham. Dep. £1 1s.

JUNE 23.

Beds C.C.—Partial internal renovation and external painting at "Cedars" School, Luton. County Architectural Dept., Shire Hall, Bedford. Dep. £1 1s.

JUNE 24.

Bournemouth T.C.—Internal redecorations at various schools. B.E. and Architect.

Shrewsbury.—External painting and internal redecoration work at County Council Hospital. A. G. Chant, County Architect, 5, Belmont, Shrewsbury.

JUNE 26.

Acton T.C.—External painting of houses and flats. B.E.

Romford B.C.—External painting of 125 houses. B.E. and S. Dep. £1 1s.

JUNE 30.

Cheltenham E.C.—Redecoration at elementary schools. L. Mallinson, D. of E. Municipal Offices.

NO DATE.

West Riding C.C.—Painting work at schools at Crigglestone. Divisional Officer for Ed., (12), 8, St. John's North, Wakefield.

West Riding C.C.—Renovations at Heckmondwike Battye-st., Modern, and Victoria-st., and Mirfield Knowle schools. Div. Officer for Education, (12), 8, St. John's North, Wakefield.

West Riding C.C.—Painting, etc., of schools at Ripon, etc. A. Adcock, Div. Officer for Ed., 106, Station Parade, Harrogate.

ROAD, SEWERAGE AND WATER WORKS

JUNE 21.

Ilkeston T.C.—Advance preparation of building sites. A. O. Marshall, M.Inst., M.&Cy.E., B.E. and S. Dep. £2 2s.

JUNE 26.

Marlow U.D.C.—Extension of Seymour Park-rd. C. Kelvin Smith, S. Dep. £2 2s

JUNE 27.

Malmesbury R.D.C.—Construction of 3 in. dia. asbestos cement mains, pumphouse, provision of steel pressure tank, and incidental works. R. S. Pierce, 10, High-st., Malmesbury, Wilts. Dep. £2 2s.

JULY 1.

Isle of Ely C.C.—Construction of new concrete road and other works. County S., County Hall, March.

NO DATE.

Cheltenham R.D.C.—Supply and laying of about 1,800 lin. yds. of 3 in. dia. spun-iron mains, complete with specials, fittings, etc. Names to J. H. Haiste, M.Inst.C.E., 22, Queen-sq., Woodhouse-la., Leeds, 2.

Cheltenham R.D.C.—Supply and laying of about 2,300 lin. yds. of 4 in. dia. spun-iron mains, complete with specials, fittings, etc. Names to E. H. Rossor, A.R.San.I., 14, Imperial-sq.

PUBLIC APPOINTMENTS

JUNE 21.

Bradford.—Temporary Architectural Assistants. £375, plus £45 10s. war bonus. Applications, quoting E.A. 969 XA, to Ministry of Labour and National Service, Room 432, Alexandra House, Kingsway, London, W.C.2.

JUNE 23.

West Ham C.B. — Temporary Assistant Building Surveyor. £400, plus £49 10s. 9d. war bonus. Forms from B. S., Town Hall, West Ham, E.15.

JUNE 24.

Manchester T.C.—Temporary Architectural Assistants. Director of Housing, Town Hall.

JUNE 28.

Cheshire Joint Sanatorium Board.—Clerk of Works to superintend erection of extensions at Burntwood Sanatorium. £8 p.w. Forms from G. C. Scrimgeour, Clerk to the Board, St. John's House, Chester.

JUNE 30.

Belfast Education Authority.—Head of Building Trades Department at College of Technology. £600-£25-£700 or £800. Application form from J. Stuart Hawnt, D. of E., Education Office, College of Technology, Belfast.

JULY 1.

***Cheltenham.**—Assistant in Building Dept. Forms and particulars from The Registrar, North Gloucestershire Technical College, Cheltenham.

***Eastbourne C.B.**—Senior Assistant Architect. F. H. Busby, T.C.

GENERAL BUILDING WORK

Aintree.—Lancashire E.C. propose extensions to existing school premises for additional accommodation.

Ashton-under-Lyne. — Licensing Justices approved plans for structural alterations and additional lavatory accommodation at "Old Dog" P.H., Old-st.

Bakewell.—Over Haddon Parish Council Building Committee propose parish hall.

Brighouse.—T.C. propose: Construction of sanitary conveniences at rear of "Black Bull" hotel, Briggate; adaptation of portion of Waring Green premises for Youth Centre.

Burton-on-Trent.—E.C. propose six new schools on selected sites.

Cheadle Hulme.—Manchester Warehousemen and Clerks' Orphan Schools Board of Management, 24, Mosley-st., Manchester 2, propose erection of prefabricated buildings as extensions to orphan schools

Chester.—E.C. propose junior technical college at Queen's Park.—C. of E. Authorities propose girls' school at Eaton-rd.—R.C. Authorities propose Catholic schools off Wrexham-rd.

Chesterfield.—Tennant Bros., Ltd., Bridge-st., Sheffield 3, propose rebuilding "Devonshire Arms" hotel, on new site.

Chesterfield.—Vicar and Churchwardens of Parish Church propose improvements to buildings and tower, at £3,000.

Darley Dale.—Branch of British Legion Building Committee propose memorial hall, at £2,500.

Filey.—U.D.C. propose adaptation of Cottage estate for provision of offices.

Hebburn.—Handicraft centre at New Town school to be restored. Plans by J. Dibble, S.

Hinckley.—Rev. G. E. Turner and Managers of St. Mary's Parish Church propose rebuilding Church schools, at £30,000.

Horsforth.—Steam Laundry Co., Ltd., propose erection of carpet cleaning works, garages, petroleum filling station, offices, etc.

Hull.—T.C. propose community centre at Bilton Grange housing estate.

Keighley.—E.C. propose extensions to buildings at electricity works, at £7,265.

Lancaster.—Lancashire P.A.C. propose sanitary annexe to Parkside Institution, Lancaster, at £485.

Leigh.—Lancashire P.A.C. propose adaptations at female casual block at institution, at £500.

Manchester.—M.H. approved plans for completion of 158 further flats at Miles Platting, for T.C.

Manchester.—E.C. approved erection of buildings for accommodation of school A.T.C. at North Manchester High school for Boys, and at Didsbury Central school for Boys.

Mansfield.—E.C. propose improvements at Pleasley Hill Junior and Infant school, school clinic and Berry Hill Open-air school, Rainworth Junior and Infant school, sculleries at Newgate school.—T.C. to acquire Gilcroft-chbrs., for adaptation for Public Health Dept.

Newcastle-under-Lyme.—T.C. propose development of Ashfields for educational centre providing for a Young People's College, Senior Technical College and one or two technical schools. Plans by Architect, Bournville Estate Office.—B.S. to prepare plans for conversion of buildings at Chesterton into maternity hospital. Associated British Cinemas, Ltd., London, W.1, prepared plans for cinema at Penkhull-st. W. R. Davidge & Partners, 5, Victoria-st., S.W.1, are architects for cinema at Merrial-st., for Gaumont-British Cinema Co., Ltd.—N. A. Pepper and W. P. Tams, dairymen, propose erection of milk processing plant and buildings at Hempstalls-la.—T.C. propose erection of public conveniences on six sites.—Staffordshire E.C. propose erection of Technical school. Plans by A. C. H. Stillman (F.), County Education Architect, County Offices, Stafford.

Rainford.—Higher E.C. propose erection of junior school.

Rochdale.—Watch Committee propose erection of police station at Norden.

Sedgley.—U.D.C. approved extensions for S. Cox & Sons, Ltd., safe makers.

Sheffield.—T.C. propose adaptation of premises at Norfolk-st., for Public Health Department.—Y.W.C.A., 16, St. James'-st., propose erection of prefabricated building at Herries-rd., Shirecliffe estate, for assembly hall.

Smethwick.—T.C. approved extensions to laundry at Dale -st., Smethwick Laundry Co., Ltd.

South Shields.—Tasker & Child, Trinity-bldgs., New Bridge-st., Newcastle-on-Tyne, prepared plans for alterations at Westoe-rd., for Broughs, Ltd.—T.C. propose three 'bus shelters, at £100 each.—Owners of Queen's Theatre, Mile End-rd., propose acquiring additional land for reconstruction and extension of building. Architect is William Stockdale, Howard-st., North Shields.

Staffordshire.—Potteries Water Board, Stoke-on-Trent, propose erection of control house and pumping station.

Walsall.—Justices approved plans by W. H. Shipley, architect, Gorway-rd., for hotel at junction of Lichfield-rd. and Selman's-hill, Bloxwich, at £15,000.

West Hartlepool.—T.C. to provide additional office accommodation for Boro' Treas. Dept.—B.E. to report on suitable sites at Dyke House, Thornhill, Burbank-st. and Seaton Carew areas for erection of nurseries.

BRITISH RESTAURANTS AND CANTEENS

Batley.—E.C. propose kitchen at Junior Technical school canteen.

Bolton.—E.C. propose central school kitchen in eastern district.

Brighouse.—T.C. to erect central kitchen at Rastrick common site.

Durham.—B. of E. approved C.C.'s plans for central kitchen at Sacriston.

Fifeshire.—C.C. to erect B.R. at Muiredge from plans by George Sandelands, County-bldgs., Cupar.

Heywood.—T.C. propose conversion of mission-hall at Fox-st., for B.R.

Lancashire.—E.C. propose alterations to various schools for additional dining centres, at £1,071.

Loughborough.—E.C. propose kitchen at Hathern school.

Mansfield.—E.C. propose kitchens at Carter-la. and Broomhill schools.

Middleton.—T.C. propose communal feeding centre at Scouts' Hall, Middleton Junction.

Oldham.—E.C. propose self-contained kitchen for school meals at Waterloo.

Salford.—E.C. received approval of B.E. for extending dining-room accommodation and kitchen at Pendleton High school for Girls, at £1,500.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Dunston-on-Tyne.—Erection of canteen at Trading Estate: *H. E. Pitt, Ltd., Leopold-st., Millfield, Sunderland.

Evesham.—Erection of weigh office and weighbridge to gas works, for Gas Committee. C. H. Edwards, Gas E. & Manager: *F. Allard, Black Bridges, Worcester-rd., Evesham, £259.

Keighley.—(a) Adaptation and repairs to requisitioned premises at South-st., Bengal-st., and Colne-st.; (b) Greenend-rd., Morton, for T.C. E. J. Felgate (A.), Boro' Architect, Municipal Offices: *(a) Ernest Turner, Ltd., 4, Bradford-rd., £661; *(b) H. V. Robinson, Ltd., Alice-st., £194 (both of Keighley).

Kiveton Park.—Reconditioning eight houses at Fir Vale, Harthill, for R.D.C. W. M. Gibson, Council Offices, Kiveton Park, nr. Sheffield: *Mirfin & Dawson, Ltd., Ranby, Retford, Notts, £314.

Lancashire.—Works, for T.C. County Architect, A. T. Nicholson (F.), County-bldgs., Fishergate-hill, Preston—Alterations, etc., to schools for provision of school meals at Lea Endowed C.E., Lea R.C., Woodplumpton Catforth, Woodplumpton Catforth St. Robert's R.C., Woodplumpton Cottam R.C.: *T. Brown, Eaves, Woodplumpton, Preston. Woodplumpton C.E., Broughton-in-Preston Grammar, Barton C.E., Barton Newsham St. Mary's R.C.: *J. Parker & Son, East Leigh, Bartle, nr. Preston. Fulwood and Cadley, Fulwood and Cadley Harris Dept.: *J. H. Pilkington, Sharoe Green-la., Fulwood, Preston. Withnell St. Joseph's R.C.: *W. Brown, Brinscall, nr. Chorley. Prescot and Rainford central kitchen: *T. Winstanley, Woodlands, Rainford, nr. St. Helens. Huyton-with-Roby St. Dominic's R.C. schools: *John Pinnington & Sons, Roby-rd., Huyton, nr. Liverpool.

¶London (Air Ministry).—List of new contracts to value of £500 or over for week ended June 10.

Erection of structural steelwork: West Midlands Erection Co., Wolverhampton.

Electrical work: McKeown and Martin, Ltd., Belfast; Bower Engineering Works (Electrical and General), Ltd., London, E.C.4.

Well-boring work: Le Grand Sutcliffe and Gell, Ltd., Southall, Middx.

Agricultural work: J. Burnley & Sons, Ltd., London, S.W.15.

Surface dressing work: W. and J. Glossop, Ltd., London, W.6; Thos. Ashley (Contractors), Ltd., Wrawby, Lincs; Fitzpatrick & Sons (Contractors), Ltd., London, E.3; Alexander Asphalte Co., Ltd., Bristol, 9.

Hot water supply work: Wm. Freer, Ltd., Leicester.

Heating and ventilating work: F. G. Alden, Ltd., Oxford.

Building work: Thos. Lowe & Sons, London, W.6; G. and J. Seddon, Ltd., Bolton, Lancs.

Installation work: Simmons and Hawker, Ltd., London, S.W.18; Rigg and Remington, Ltd., London, N.W.7; Beck & Co., London, S.E.1; Barvis Partners, Ltd., Brentwood, Essex.

Civil engineering work: Taylor Woodrow Construction, Ltd., Southall, Middx.

General maintenance work: Johnson and Bailey, Ltd., Cambridge.

¶London (Ministry of Works).—Contracts placed by M.O.W. during week ending June 8.

Bucks: Building work, A. Roberts & Co., Ltd., 74, Earls Court-rd., W.8.

Durham: Building and civil engineering work, G. Dougill & Sons, Ltd., Chestnut-st., Darlington; building work, J. Gerrard & Sons, Ltd., Swinton, Manchester.

Essex: Building work, E. C. P. Brand, Mount House Works, Braintree.

Lancs: Building work, Walter Peak, 17, Church-st., Warrington.

Middx: Building work, Percy Bilton, Ltd., Park-st., Mayfair, W.1.

Staffs: Civil engineering, Staffordshire Potteries, Water Board, Hanley, Stoke-on-Trent.

Worcs: Building work, Bovis, Ltd., Stanhope Gate, W.1.

¶**London (War Dept.).**—Works contracts placed by War Dept. for week ended June 3:—

Lancs: Miscellaneous work, Arthur McColl & Son, St. Helens, Lancs; John Webster Bros., Liverpool 15; Worthingtons (Contractors), Ltd., Liverpool 6.

Flintshire: Building work, G. Musker Bros., Ltd., Swinton, Manchester.

Staffs: Miscellaneous work, Arthur Holmes & Sons, Ltd., Burton-on-Trent, Staffs.

Norfolk and Suffolk: Miscellaneous work, W. Peeke-Vout & Son, Watton, Norfolk.

Gloucestershire: Hutting (erection), Ashmore Contractors, Ltd., Gloucester.

Essex: Miscellaneous work, H. W. Wilson, Ltd., South Ockenden, Essex.

Sussex: Miscellaneous work, Saunders (Contractors), Ltd., Burgess Hill, Sussex.

Manchester.—Works for T.C. G. Noel Hill (F.), City Architect: Conversion of "Woodville," Sale-rd., Northenden, into two self-contained flats: *Direct Works Section, Manchester Corporation, Wharf-st., Ardwick 4.

Middlesbrough.—Erection of prefabricated hut for temporary accommodation at Whinney Banks school, for E.C. W. H. Watson, Education Architect: *J. H. Proudlock, Middlesbrough, £880.

Sheffield.—Works for T.C. W. George Davies (F.), City Architect. Improve and extension of sleeping accommodation for nurses at Dryden block, at Fir Vale Institution: *Public Works Dept., Sheffield Corporation, Worthing-rd., £275; repairs of requisitioned house at 10, Kenwood-rd. (additional work): *C. Middleton & Sons, 48, Greenhill-rd.; essential repairs to Lodge, Grange-cres.: *Public Works Dept., Sheffield Corporation, Worthing-rd., £250 (all of Sheffield).

West Bromwich.—Construction of mass concrete brick faced retaining wall at Hall Green-rd., for T.C. J. G. Jefferson, B.S.: *M. A. Boswell, School-rd., Wolverhampton.

Electrical Industry Conditions.

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